


**M.A. (Education)**

**SECOND YEAR**

**MAEDN-5041**

INSTITUTE OF DISTANCE EDUCATION
Rajiv Gandhi University

www.ide.rgu.ac.in

# ENVIRONMENTAL EDUCATION

# ENVIRONMENTAL EDUCATION

**MA [Education]**

**Second Year**

**MAEDN 5041**

**RAJIV GANDHI UNIVERSITY**
Arunachal Pradesh, INDIA - 791 112

| BOARD OF STUDIES | |
|---|---|
| 1. **Prof. K C Kapoor**<br>Department of Education<br>Rajiv Gandhi University | Chairman |
| 2. **Prof. J C Soni**<br>Department of Education<br>Rajiv Gandhi University | Member |
| 3. **Dr. P K Acharya**<br>Department of Education<br>Rajiv Gndhi University | Member |
| 4. **Ms. Moyir Riba**<br>Institute of Distance Education<br>Rajiv Gandhi University | Member |
| 5. **Dr. Ashan Riddi**<br>Director, IDE | Member Secretary |



**Authors:**

**Dr Manorama Mathur:** Units (1.0-1.3, 1.3.3-1.8, 2.11-2.16, 3.0-3.2.2, 3.3-3.3.1, 3.4-3.9, 4.0 - 4.1, 4.2.1, 4.3, 4.5-4.10, 6, 7.4-7.4.4, 8) © Dr Manorama Mathur, 2014

**Sateeshchandra Joshi:** Units (2.0-2.4, 2.5, 2.7-2.10, 7.0-7.3, 7.4.5-7.9) © Sateeshchandra Joshi, 2014

**Chetna Jathol and Sonal Chabra:** Units (5.0 - 5.2.2, 5.2.4, 5.3, 5.6 - 5.12) © Chetna Jathol and Sonal Chabra, 2014

**Vikas Publishing House:** Units (1.3.1, 1.3.2, 2.4.1, 2.6, 3.2.3, 3.3.2, 4.2, 4.4 - 4.4.1, 5.2.3, 5.4, 5.5) © Reserved, 2014



All rights reserved. No part of this publication which is material protected by this copyright notice may be reproduced or transmitted or utilized or stored in any form or by any means now known or hereinafter invented, electronic, digital or mechanical, including photocopying, scanning, recording or by any information storage or retrieval system, without prior written permission from the Publisher.

"Information contained in this book has been published by Vikas Publishing House Pvt. Ltd. and has been obtained by its Authors from sources believed to be reliable and are correct to the best of their knowledge. However, iDE—Rajiv Gandhi University, the publishers and its Authors shall be in no event be liable for any errors, omissions or damages arising out of use of this information and specifically disclaim any implied warranties or merchantability or fitness for any particular use"





Vikas® is the registered trademark of Vikas® Publishing House Pvt. Ltd.

VIKAS® PUBLISHING HOUSE PVT LTD
E-28, Sector-8, Noida - 201301 (UP)
Phone: 0120-4078900 • Fax: 0120-4078999
Regd. Office: 576, Masjid Road, Jangpura, New Delhi 110 014
• Website: www.vikaspublishing.com • Email: helpline@vikaspublishing.com


# About the University

Rajiv Gandhi University (formerly Arunachal University) is a premier institution for higher education in the state of Arunachal Pradesh and has completed twenty-five years of its existence. Late Smt. Indira Gandhi, the then Prime Minister of India, laid the foundation stone of the university on 4th February, 1984 at Rono Hills, where the present campus is located.

Ever since its inception, the university has been trying to achieve excellence and fulfill the objectives as envisaged in the University Act. The university received academic recognition under Section 2(f) from the University Grants Commission on 28th March, 1985 and started functioning from 1st April, 1985. It got financial recognition under section 12-B of the UGC on 25th March, 1994. Since then Rajiv Gandhi University, (then Arunachal University) has carved a niche for itself in the educational scenario of the country following its selection as a University with potential for excellence by a high-level expert committee of the University Grants Commission from among universities in India.

The University was converted into a Central University with effect from 9th April, 2007 as per notification of the Ministry of Human Resource Development, Government of India.

The University is located atop Rono Hills on a picturesque tableland of 302 acres overlooking the river Dikrong. It is 6.5 km from the National Highway 52-A and 25 km from Itanagar, the State capital. The campus is linked with the National Highway by the Dikrong bridge.

The teaching and research programmes of the University are designed with a view to play a positive role in the socio-economic and cultural development of the State. The University offers Undergraduate, Post-graduate, M.Phil and Ph.D. programmes. The Department of Education also offers the B.Ed. programme.

There are fifteen colleges affiliated to the University. The University has been extending educational facilities to students from the neighbouring states, particularly Assam. The strength of students in different departments of the University and in affiliated colleges has been steadily increasing.

The faculty members have been actively engaged in research activities with financial support from UGC and other funding agencies. Since inception, a number of proposals on research projects have been sanctioned by various funding agencies to the University. Various departments have organized numerous seminars, workshops and conferences. Many faculty members have participated in national and international conferences and seminars held within the country and abroad. Eminent scholars and distinguished personalities have visited the University and delivered lectures on various disciplines.

The academic year 2000-2001 was a year of consolidation for the University. The switch over from the annual to the semester system took off smoothly and the performance of the students registered a marked improvement. Various syllabi designed by Boards of Post-graduate Studies (BPGS) have been implemented. VSAT facility installed by the ERNET India, New Delhi under the UGC-Infonet program, provides Internet access.

In spite of infrastructural constraints, the University has been maintaining its academic excellence. The University has strictly adhered to the academic calendar, conducted the examinations and declared the results on time. The students from the University have found placements not only in State and Central Government Services, but also in various institutions, industries and organizations. Many students have emerged successful in the National Eligibility Test (NET).

Since inception, the University has made significant progress in teaching, research, innovations in curriculum development and developing infrastructure.

# About IDE

The formal system of higher education in our country is facing the problems of access, limitation of seats, lack of facilities and infrastructure. Academicians from various disciplines opine that it is learning which is more important and not the channel of education. The education through distance mode is an alternative mode of imparting instruction to overcome the problems of access, infrastructure and socio-economic barriers. This will meet the demand for qualitative higher education of millions of people who cannot get admission in the regular system and wish to pursue their education. It also helps interested employed and unemployed men and women to continue with their higher education. Distance education is a distinct approach to impart education to learners who remained away in the space and/or time from the teachers and teaching institutions on account of economic, social and other considerations. Our main aim is to provide higher education opportunities to those who are unable to join regular academic and vocational education programmes in the affiliated colleges of the University and make higher education reach to the doorsteps in rural and geographically remote areas of Arunachal Pradesh in particular and North-eastern part of India in general. In 2008, the Centre for Distance Education has been renamed as "Institute of Distance Education (IDE)."

Continuing the endeavor to expand the learning opportunities for distant learners, IDE has introduced Post Graduate Courses in 5 subjects (Education, English, Hindi, History and Political Science) from the Academic Session 2013-14.

The Institute of Distance Education is housed in the Physical Sciences Faculty Building (first floor) next to the University Library. The University campus is 6 kms from NERIST point on National Highway 52A. The University buses ply to NERIST point regularly.

**Outstanding Features of Institute of Distance Education:**

(i) At Par with Regular Mode

Eligibility requirements, curricular content, mode of examination and the award of degrees are on par with the colleges affiliated to the Rajiv Gandhi University and the Department(s) of the University.

(ii) Self-Instructional Study Material (SISM)

The students are provided SISM prepared by the Institute and approved by Distance Education Council (DEC), New Delhi. This will be provided at the time of admission at the IDE or its Study Centres. SISM is provided only in English except Hindi subject.

(iii) Contact and Counselling Programme (CCP)

The course curriculum of every programme involves counselling in the form of personal contact programme of duration of approximately 7-15 days. The CCP shall not be compulsory for BA. However for professional courses and MA the attendance in CCP will be mandatory.

(iv) Field Training and Project

For professional course(s) there shall be provision of field training and project writing in the concerned subject.

(v) Medium of Instruction and Examination

The medium of instruction and examination will be English for all the subjects except for those subjects where the learners will need to write in the respective languages.

(vi) Subject/Counselling Coordinators

For developing study material, the IDE appoints subject coordinators from within and outside the University. In order to run the PCCP effectively Counselling Coordinators are engaged from the Departments of the University, The Counselling-Coordinators do necessary coordination for involving resource persons in contact and counselling programme and assignment evaluation. The learners can also contact them for clarifying their difficulties in then respective subjects.

# SYLLABI-BOOK MAPPING TABLE

## Environmental Education

| Syllabi | Mapping in Book |
|---|---|
| **UNIT I** | |
| **Environment and Education**<br>• Man-Environment relationship: The concept of environment, Meaning and nature, Concepts of determinism Possiblism and neo-determinism<br>• Environmental Education - Meaning, Nature and scope | **Unit 1:** Environment and Education **(Pages 3-25)** |
| **UNIT II** | |
| **Environmental Resources**<br>• Natural resources - Land, Air, Water, Flora and Fauna<br>• Cultural Resources-Monuments, Buildings, Specimen of art/ architecture, Cultures their protection and promotion | **Unit 2:** Environmental Resources **(Pages 27-70)** |
| **UNIT III** | |
| **Environmental Resources Management**<br>• Natural resources and associated problems<br>• Resource depletion, Natural disasters/hazards and their management | **Unit 3:** Environmental Resources Management **(Pages 71-105)** |
| **UNIT IV** | |
| **Approaches for Environmental Education**<br>• Curriculum for Environmental Education - Stage specific - primary, Secondary and senior secondary.<br>• Approaches- Inter and intra-disciplinary,<br>• Topical units and integrated units<br>• Model - Infusion and infused | **Unit 4:** Approaches for Environmental Education **(Pages 107-134)** |
| **UNIT V** | |
| **Role of Media**<br>• Mass Media - Its use and abuse for environmental education - T.V., Cinema, Radio, News papers, Journals, Magazines, Reports<br>• Methods - Dialogue, Debate, Discussion, Drama, Seminar, Workshop, Symposium, Field survey, Field trips, Quiz, Projects, Exhibition, Models, Charts, Books, Eco-clubs, Meetings, Speeches, Songs, Street play, etc. | **Unit 5:** Role of Media **(Pages 135-168)** |
| **UNIT VI** | |
| **Evaluation in Environmental Education**<br>• Concept of Evaluation in Environmental education<br>• Types Evaluation in Environmental education<br>• Tools of Evaluation in Environmental education | **Unit 6:** Evaluation in Environmental Education **(Pages 169-182)** |

**UNIT VII**

**Environment and Quality of life**

- Population growth, poverty, nutrition, health and sanitation, pollution, global warming.
- Eco-politics, sustainable development, bio-diversity
- Modern life style, and its impact on environment
- Values and ethics of life

**Unit 7:** Environment and Quality of Life
**(Pages 183-244)**

**UNIT VIII**

**Research and Development in Environmental Education:**

- UNESCO-UNEP Environmental Education Programmes
- Role of UGC/universities, NCERT, SIE, and NGOs for Environmental Education
- Emerging Areas of Research in Environmental Education.

**Unit 8:** Research and Development in Environmental Education
**(Pages 245-278)**

# CONTENTS


**INTRODUCTION** 1

**UNIT 1 ENVIRONMENT AND EDUCATION** 3-25

1.0 Introduction
1.1 Unit Objectives
1.2 Man–Environment Relationship
  1.2.1 Definitions of Environment
  1.2.2 Concept and Meaning of Environment
  1.2.3 Concept of Determinism
  1.2.4 Concept of Possibilism
  1.2.5 Neo-determinism
1.3 Introduction to Environmental Education
  1.3.1 Need for Environmental Education
  1.3.2 International Meets of Environmental Educations
  1.3.3 Definitions of Environmental Education
  1.3.4 Nature of Environmental Education
  1.3.5 Nature and Scope of Environmental Education
1.4 Summary
1.5 Key Terms
1.6 Answers to 'Check Your Progress'
1.7 Questions and Exercises
1.8 Further Reading

**UNIT 2 ENVIRONMENTAL RESOURCES** 27-70

2.0 Introduction
2.1 Unit Objectives
2.2 Natural Resources
  2.2.1 Classification of Natural Resources
2.3 Land Resources
2.4 Air Resources
  2.4.1 Air Pollution
2.5 Water Resources
2.6 Forest Resources
2.7 Mineral Resources
2.8 Food Resources
2.9 Energy Resources
2.10 Role of Individuals in the Conservation of Natural Resources
2.11 Cultural Resources
  2.11.1 Obstacles of Cultural Harmony
  2.11.2 Specimens of Art/Architecture
  2.11.3 Protection of Monuments
  2.11.4 Indian Architecture
  2.11.5 Protection and Promotion of Cultural Resources
2.12 Summary
2.13 Key Terms
2.14 Answers to 'Check Your Progress'
2.15 Questions and Exercises
2.16 Further Reading

**UNIT 3 ENVIRONMENTAL RESOURCES MANAGEMENT** 71-105

3.0 Introduction
3.1 Unit Objectives
3.2 Natural Resources and Associated Problems
  3.2.1 Causes of Environmental Degradation
  3.2.2 Steps for Prevention of Environmental Degradation
  3.2.3 Saving Resource from Depletion
3.3 Natural Disasters/Hazards and their Management
  3.3.1 Types of Environmental Hazards/Disasters
  3.3.2 Disaster Management Cycle
3.4 Environmental Awareness
  3.4.1 Objectives of Environmental Awareness
  3.4.2 Education and Environmental Awareness
  3.4.3 Attitudinal Changes and Environmental Education
3.5 Summary
3.6 Key Terms
3.7 Answers to 'Check Your Progress'
3.8 Questions and Exercises
3.9 Further Reading

**UNIT 4 APPROACHES FOR ENVIRONMENTAL EDUCATION** 107-134

4.0 Introduction
4.1 Unit Objectives
4.2 Curriculum for Environmental Education
  4.2.1 Stage Specific Curriculum
4.3 Inter and Intra-Disciplinary Approaches
  4.3.1 Multidisciplinary Approach (Infusion)
  4.3.2 Interdisciplinary Approach (Insertion)
4.4 Topical Units and Integrated Units
  4.4.1 NCERT Approach to Teaching Environmental Education
4.5 Models—Infusion and Infused
4.6 Summary
4.7 Key Terms
4.8 Answers to 'Check Your Progress'
4.9 Questions and Exercises
4.10 Further Reading

**UNIT 5 ROLE OF MEDIA** 135-168

5.0 Introduction
5.1 Unit Objectives
5.2 Mass Media: Its Use and Abuse for Environmental Education
  5.2.1 Role of Mass Media
  5.2.2 Functions of Mass Media
  5.2.3 Mass Media in Education
  5.2.4 Types of Mass Media
5.3 Educational Broadcasting
5.4 Role of Radio in Education
  5.4.1 Educational Characteristics of Radio
  5.4.2 Major Educational Projects of Radio in India
  5.4.3 Benefits Associated with Radio
  5.4.4 Limitations of Radio Broadcasting
5.5 Role of Television in Education
  5.5.1 Educational Characteristics of Television
5.6 Communication Satellites
  5.6.1 Satellite Instructional Television Experiment
  5.6.2 Indian National Satellite (INSAT)
  5.6.3 GRAMSAT Programme
5.7 Methods of Spreading Awareness on Environment
5.8 Summary
5.9 Key Terms
5.10 Answers to 'Check Your Progress'
5.11 Questions and Exercises
5.12 Further Reading

**UNIT 6 EVALUATION IN ENVIRONMENTAL EDUCATION** 169-182

6.0 Introduction
6.1 Unit Objectives
6.2 Concept of Evaluation in Environmental Education
6.3 Types of Evaluation in Environmental Education
6.4 Why Evaluation is Required?
6.5 Evaluation Process
6.6 Characteristics of a Good Evaluation Process
6.7 Role of Teacher and Students in Evaluation Process
6.8 Role of Departments and other Agencies in Evaluation Process
6.9 Obstacles to Evaluation
6.10 Co-curricular Activities in Environmental Education as Evaluation Tool
6.11 Summary
6.12 Key Terms
6.13 Answers to 'Check Your Progress'
6.14 Questions and Exercises
6.14 Further Reading

**UNIT 7 ENVIRONMENT AND QUALITY OF LIFE** 183-244

7.0 Introduction
7.1 Unit Objectives
7.2 Population Growth
  7.2.1 Social Impact of Population Growth
  7.2.2 Ecological Impacts of Population Growth
  7.2.3 Relationship between Population and Quality of Life
7.3 Biodiversity and its Conservation
  7.3.1 Levels of Biodiversity
  7.3.2 Principles of Biodiversity
  7.3.3 Biogeographical Classification of India
  7.3.4 Global Biodiversity
  7.3.5 Threats to Biodiversity
  7.3.6 Man-Wildlife Conflicts
  7.3.7 Endangered and Endemic Species of India
  7.3.8 Conservation of Biodiversity
7.4 Modern Lifestyle and its Impact on Environment
  7.4.1 Modern Lifestyle: Effect on Environment
  7.4.2 Values and Ethics of Life
  7.4.3 Ethics for Life
  7.4.4 Sustainable Development
  7.4.5 Balance between Trade and Environmental Policy

7.4.6 Fundamentals of Environment and Sustainable Development
7.4.7 Urban Problems Related to Energy
7.4.8 Water Conservation
7.4.9 Resettlement and Rehabilitation Issues
7.4.10 Environmental Ethics
7.4.11 Climate Change
7.4.12 Wasteland Reclamation
7.4.13 Strategies for Ensuring Environment-Friendly Business Operations
7.4.14 Environmental Legislations
7.4.15 Enforcement of Environmental Legislation: Major Issues
7.5 Summary
7.6 Key Terms
7.7 Answers to 'Check Your Progress'
7.8 Questions and Exercises
7.9 Further Reading

**UNIT 8 RESEARCH AND DEVELOPMENT IN ENVIRONMENTAL EDUCATION** 245-278

8.0 Introduction
8.1 Unit Objectives
8.2 UNESCO-UNEP Environmental Education Programmes
8.3 Role of UGC/Universities, NCERT and NGOs for Environmental Education
8.4 Concept of Research
8.4.1 Steps in Conducting Research
8.4.2 Research Methods
8.4.3 Significance of Research in Environmental Education
8.5 Emerging Areas of Research in Environmental Education
8.6 Strategies in Enviornmental Education
8.7 Researches and Projects in Different Field of Environment Education
8.8 Summary
8.9 Key Terms
8.10 Answers to 'Check Your Progress'
8.11 Questions and Exercises
8.12 Further Reading



# INTRODUCTION

NOTES

The large-scale exploitation of natural resources has resulted in the depletion of almost all of the available resources. Unchecked population growth and rapid industrialization has accelerated the process of deterioration of natural resources. The world finally woke up to the collective damage done over the centuries, after experiencing drastic climatic change and other related incidents, such as unpredictable rains, earthquakes and floods. Environmental education, thus, lays emphasis on spreading awareness and education regarding the need to preserve and protect our natural environment.

This book highlights the increasing importance of our environment and the need of educating the people for protecting the environment. Environment, as you know, is the sum of water, air and land and the inter-relationships among them and also with all the living organisms. Natural resources play a vital role in sustaining life on the earth. Natural resources are usually classified into two, namely renewable and non-renewable resources. If one has to understand the environment, one has to first have knowledge about ecology and ecological balance. Biodiversity is the variation of life forms within a given ecosystem, biome or the entire earth. Biodiversity is often used as a measure of the health of biological systems. A study of different types of pollution and their impact on the environment will make you contemplate your future actions in conserving and utilizing the available resources in a prudent manner. This book will make you aware of the various actions taken by the government and non-government organizations and certain international programmes that help to safeguard the environment.

This book - *Environmental Education* - has been designed keeping in mind the self-instruction mode (SIM) format and follows a simple pattern, wherein each unit of the book begins with the *Introduction* followed by the *Unit Objectives* for the topic. The content is then presented in a simple and easy-to-understand manner, and is interspersed with *Check Your Progress* questions to reinforce the student's understanding of the topic. A list of *Questions and Exercises* is also provided at the end of each unit. The *Summary*, *Key Terms* and *Activity* further act as useful tools for students and are meant for effective recapitulation of the text.

This book is divided into eight units:

**Unit 1:** Explains the man-environment relationship

**Unit 2:** Deals with the various natural resources and cultural resources and the steps that can be taken for their protection and promotion

**Unit 3:** Describes the management of environmental resources

**Unit 4:** States the various approaches for environmental education

**Unit 5:** Elaborates on the role of media in the field of environmental education

**Unit 6:** Explains the concept of evaluation in environmental education

**Unit 7:** Deals with environment and quality of life

**Unit 8:** Recognizes the scope of research and development in environmental education

# UNIT 1 ENVIRONMENT AND EDUCATION

NOTES

**Structure**


1.0 Introduction
1.1 Unit Objectives
1.2 Man–Environment Relationship
  1.2.1 Definitions of Environment
  1.2.2 Concept and Meaning of Environment
  1.2.3 Concept of Determinism
  1.2.4 Concept of Possibilism
  1.2.5 Neo-determinism
1.3 Introduction to Environmental Education
  1.3.1 Need for Environmental Education
  1.3.2 International Meets of Environmental Educations
  1.3.3 Definitions of Environmental Education
  1.3.4 Nature of Environmental Education
  1.3.5 Nature and Scope of Environmental Education
1.4 Summary
1.5 Key Terms
1.6 Answers to 'Check Your Progress'
1.7 Questions and Exercises
1.8 Further Reading


## 1.0 INTRODUCTION

Education is the means and mechanism of over all development of a human being's personality. Environment is the composition of external conditions that affect life and development of man and all other living organisms. Mankind is surrounded by natural, socio-cultural as well as psychological environment. Human beings are at the centre of concern for sustainable development. They are entitled to a healthy and productive life in harmony with nature. Educational process of development is an important aspect of biological process of environment. The environmental processes are both developmental and destructive in nature. This critical aspect makes the studies of environment very significant for human survival.

In this unit, you will learn about the concept, meaning and nature of environment; concept of determinism, possibilism and neo-determinism.

## 1.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Define environment and environmental education
- Discuss the nature and principles of environmental education
- Explain the scope of environmental education
- Discuss various environment educational programmes
- Explain the concept of determinism, possiblism and neo-determinism

NOTES

## 1.2 MAN–ENVIRONMENT RELATIONSHIP

Environment is the life support system on which the existence and perpetuation of all living organisms depend. The present day environment can be considered to have physical, chemical, biological, scientific and technological components in which the organisms remain embedded. The whole environment is composed of three complexes.

- Abiotic
- Biotic
- Scientific and technological

All the three sub-complexes interacting with each other constitute the total environment. The environment today is subjected to large-scale transformations in various abiotic and biotic components. The third sub complex has witnessed massive changes occurring due to scientific and technological revolutions that have taken place during the past century. Haber (1989) has called this artificial environment as 'techno-ecosystems'.

### 1.2.1 Definitions of Environment

- According to Misra (1962), 'The organism is supposed to remain embedded in a matrix called environment.'
- 'Aggregate of all conditions affecting the existence, growth and welfare of an organism or group of organisms.'— Webster's concise dictionary
- 'A Person's environment consists of the sum total of the stimulations which he receives from his conception until his death.' — Boring.
- 'The environment is everything that affects the individual except his genes.'— Anne Anastasi.
- 'The term environment is used to describe in the aggregate all the external forces, influences and conditions which affect the life, nature, behavior and the growth, development and maturity of living organisms.' — Douglass and Holland.

Viewing all the definitions, it is very easy to answer the question—What is environment?

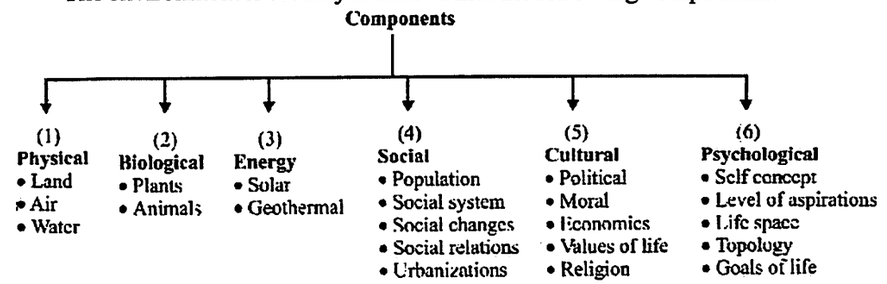
- Sum total of stimulations an individual receives up to death
- External forces, influences and conditions
- Inseparable whole which is constituted by the interacting systems of physical, biological and cultural elements
- Surroundings of an organism which includes both living and non-living components
- Holocoenotic concept of environment propounded by Allee and Park (1939) that all the components of environment act collectively and concurrently
- The parameters of environment are interwoven with each other constituting a spider web like structure. — Cain (1944), Billing (1952, 1964)

These parameters are

- Earth, Water, Energy, Space, Air, Food, Fodder, Fuel, Fiber, Hand pollution, Water pollution, Air pollution, Nuclear emissions.



The environment is broadly classified into the following components:




### 1.2.2 Concept and Meaning of Environment

Environment has been derived from the French word 'Environ' which implies 'to encircle or surround.' All living and non-living things surrounding us comprise the environment. According to the Environment (Protection) Act 1986, 'environment' includes water, air and land and the inter- relationship which exists among and between water, air and land, and human beings, other living creatures, plants, micro-organism and property. The concept of environment can be shown as follows:

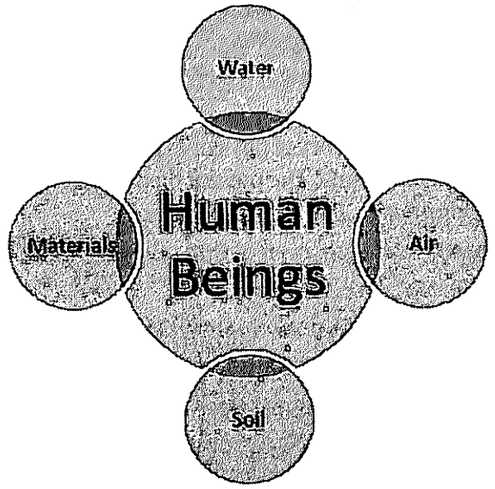



*Fig. 1.1 The Concept of Environment*

Figure 1.1 represents the elements, that is, air, water and land which surround human beings. These elements comprise the environment and hence have a direct influence on human beings. Simultaneously, human beings also influence the environment either through exploitation of natural resources or by polluting the environment. Plants, animals, micro-organisms and the structures made by man in our surroundings have a direct and indirect influence on us. The entirety of all these elements and their interactions make up the environment.

Urban environment is to some extent different from rural environment. Human beings deeply influence the urban environment. Several natural landscapes in cities have been modified or altered and replaced by man-made structures like commercial complexes, factories and transportation networks. Air, water and soil of the urban environment are completely filled with several kinds of chemicals and wastes. The range of plants and animals present in the urban environment is far less as compared to the rural environment. Also, population is dense in the urban areas as compared to the rural environment.



NOTES

## 1.2.3 Concept of Determinism

Determinism is a concept which conveys several characteristic features which are found to define a society or an individual. Human beings are controlled by the environment, and the technologies which they use. Therefore, in a given situation they present a definite behavioural pattern.

'Determinism is a metaphysical philosophical position stating that for everything that happens there are conditions such that, given those conditions, nothing else could happen. There is much determinism, depending upon what pre-conditions are considered to be determinative of an event.'

'It is not possible for a human being to do anything different from what he actually wants. In actual case, the circumstances decide the actions of an individual.'

Human beings are a part of the environment and thus, have to follow the rules of nature and the laws of science. If we feel that whatever one does is already decided then there is no blame on the events that take place. In this respect, determinism is found to be true.

The concept of determinism is a complex phenomenon. It states that whatever things are found in nature depends on their present status or conditions and the facts how things are affected by the natural laws. When position and status of the biotic agents and functioning of natural laws is understood we can easily interpret the laws of nature and science.

The hypothetical views of theory of physics explain the presence of small particles in the universe and their interactions. The present theory helps in defining the different aspects involved in determinism. The three aspects are:

1. The present status and position of things.
2. How the things follow natural laws.
3. Response of things against the applied laws.

Determinism provides-

- What conditions would be found in future estimating the status of universe.
- As determinism is a metaphysical concept, the future conditions will be existing and must be followed by natural laws.

Determinism is defined in some other ways as well:

- The event and reactions that take place have a certain cause. Without definite cause nothing is possible.
- The facts related with the effect of natural laws on the present situations explain the future pattern of things.

**Views on Quantum Theory**

- Quantum physics generally believes that determinism is false.
- Human actions are decided by quantum actions as it affects human responses.
- The future conditions can be predicted in advance if a person has sufficient computational powers.
- The freedom of one's actions can be compared with determinism.
- Determinism is not a philosophical issue rather it is an issue settled by physics.



Any theory which is not accepting the views that every event takes place is earlier decided by some causal factors cannot be a part of determinism. Many forms of determinism are defined. Some can be tested with the help of physics and philosophy of physics.



Determinism is often contrasted and confused with the following terms:

1. **Free will:** The different positions related to free will and determinism are shown below:

| | **determinism is true** | **determinism is false** |
|---|---|---|
| **Free will is compatible with determinism (i.e. compatibilism is true)** | Soft determinism | [no name] |
| **Free will is not compatible with determinism (i.e. incompatibilism is true)** | Hard determinism | Libertarianism |

2. **Compatibilism:** Free will can be compared with determinism. The other views state that determinism cannot be compared with free will. Some are of the opinion that when any event is held by determinism, free will cannot exist. On the other hand, when an event is held with free will, determinism cannot exist. Free will never considers any cause, conditions and any other determinants of behaviour.

| Determinism | Free Will: 'Free Will' is Impossible | Free Will: 'Free Will' is Possible |
|---|---|---|
| Physical Determinism is True | Hard Determinism | Compatibilism |
| Physical Determinism is False | Hard Incompatibilism | Libertarianism |

3. **Materialism:** The term materialism explains the interaction between non-biotic things only; therefore, it cannot be compared with determinism as determinism explains the reaction of biotic and non-biotic agents by using mind and soul.

### Types of Determinism

The different types of determinism are as follows:

1. **Causal determinism:** As the name suggest, it explains the law of cause and effect. Whenever there is a cause there will be an action and action will produce an effect as a response to it. The present status of the environment changes with causes bonded to it. It explains (a) The changes that place in the universe and have a long sequence which attracts our attention to their past or their origin. (b) The events are caused by some specific causes and not by their own self causal factors.

2. **Historical determinism:** As causal determinism explains the causes of events from their origin, the historical determinism adds that everything that happens is caused by antecedent conditions.
3. **Nomological determinism:** This type of determinism is a combination of past status of universe and the natural laws which decides the events of future. This form of determinism suggests that the past and present events combine to design the future by obeying the natural laws.

   The terms scientific determinism and physical determinism are synonymously used with nomological determinism.
4. **Necessitarianism:** It is a metaphysical concept which infers that every event takes place with certain causes and whatever happens has a cause and reason.
5. **Predeterminism:** This concept helps in understanding that an event which takes place is already decided in advance. There is a long sequence of occurrence which stretches the ideas back to the origin of universe which is already established. Human activities cannot check and disturb the responses of these sequences. It can be compared with causal determinism and biological determinism as it explains about the existence of future status caused by specific causes.
6. **Fatalism:** This type of determinism believes in the destiny of an individual. It explains that whatever events take place in an individual's life depend on his/her fate and human actions cannot control it.
7. **Theological determinism:** It is a form of determinism which refers to the occurrence of events by pre-decided patterns and the presence of destiny. There are two types of theological determinism namely: strong and weak theological determinism.
   - **Strong theological determinism:** Favours the occurrence of events by the dominance of super powers or the powers of God.
   - **Weak theological determinism:** Explains that whatever happens is already known to God and future is fixed.
8. **Logical determinism:** Logical determinism explains that whatever the idea formed behind the present, past and future will be either true or false. Some theories make attempts to explain the interaction between nature and creature which can be predicted.
9. **Biological determinism:** Biological determinism believes that behaviour, belief and desires depend on genetic characteristics of human beings. The behaviour of a human being is framed according to environmental reflexes that one gets.
10. **Environmental determinism:** This type of determinism is also known as climatic or geographical determinism. According to this form of determinism, the physical and social conditions of environment design, and the culture patterns decides the behaviour of an individuals. The formation of behaviour is dependent upon the stimulus response theory. Human beings act or show their response according to the type of stimulations they absorb. The climatic conditions mould the psychological setting of mind and human beings behave accordingly. Sometimes, humans migrate from one geographical location to another for survival.
11. **Cultural determinism:** Man is a social creature. Cultural determinism means that a human being is identified by the culture in which he/she lives. It is a nurture focused theory.
12. **Psychological determinism:** It is a concept which refers to the psychology of human mind. Humans act according to their requirement, need and interest and interact with their surroundings.
13. **Linguistic determinism:** Language is the mirror of mind. Whatever a human being thinks and understands, he/she expresses through language.
14. **Economic determinism:** It explains the role of economy and political features in the development of human beings. The political conditions affect the economic structure of a country.
15. **Technological determinism:** The social structure and cultural values are developing in a society through the application of technology.
16. **Media determinism:** This kind of determinism explains the role of media in a particular society. The philosophical and sociological set up of a society is influenced by media.
17. **Mathematical determinism:** This determinism accepts the concept of chance. The things that will happen in future show probability to occur or not. The probability can be confirmed only by the past experiences and the previous results.

## Factors Influencing Determinism

Some of the factors influencing determinism are:

1. **Interrelationship among individuals**
   - Mutual dependency and cooperation among individuals
   - Affection and attachments among individuals
   - Interaction between the individual and nature
   - Biotic and non-biotic agents build the environment
   - Actions and responses are the bases of determinism
2. **Grouping**

   When an affectionate bonding is developed among individuals, a group is formed. For example, family is a group. Families unite together to form a social group, ultimately, becoming a society.
3. **Continuous existence**

   Existence of an individual is dependent on the favourable conditions and circumstances. The favourable conditions are the presence of air, water, food, clothing, earth, fire and shelter for survival.
4. **Likings or disliking**

   The group of individuals is classified and identified by their liking and disliking between the groups and among the individuals. The sex, age, language, family, race, regions, religions, wealth, politics, occupation, health, physique, looks, temperament, interest and abilities are the factors that cause classification.

NOTES

**5. Infirmity and mortality**

Darwin's theory states 'Survival of the fittest.' Individuals in a biotic world are always at a risk of survival.

- Injuries, defects, diseases can cause death
- Genetic defects at the time of development
- Exposure to dangerous things

These are the three risks of survival.

**6. Coping Strategies**

The strategies by which humans cope with their environment are: adhibition, inhibition and explication.

- **Adhibition**: It means the actions, responses which are taken in use or the human remains engaged with them. These responses are used to control the situation and get perfection to fulfill the requirement.

  **Adhibitory strategies:**

  o Perseveration
  o Orderliness
  o Constant exertion
  o Risk of exploitation
  o Displacement
  o Addiction

- **Inhibition**: In contrast, inhibition means avoiding the present situation. Its strategies are fixation, regression, phobia, sleeping spells, depression, suicide, mutilation of body parts.
- **Explication**: It implies getting knowledge about the experiences, situations, signals or stimulations obtained from the environment. This type of coping strategies comprises construction, inferences, conceptualization, formulation, designing, and evaluation to get knowledge about what should take place in the environment.

## 1.2.4 Concept of Possibilism

Possibilism is a theory of geographical culture that explains that environment has certain limitations. Its culture is defined by the actions of human beings. According to Marshall Sahlins, 'Possibilism is an alternate concept of environmental determinism.'

According to Mackinder and Kropotkin, 'Possibilism in geography is, thus, considered as a distinct approach to geographical knowledge directly opposed to geographical determinism.'

Possibilism explains the relationship between the human and physical environment. Humans have a specific ability to adjust with the environment by modifying their responses. They react to the changes in environment according to the stimulus they receive from it. It is directly matched with the concept of environmental determinism which is in favour of the fact that the environment is responsible for shaping, limiting and controlling the development of culture.





NOTES

The main emphasis is given to:

- The relationship between people and their surroundings.
- People are free to decide their own direction in which they can adapt to different lifestyles.
- According to this concept, environment does not decide the actions, nature and behaviour of individuals rather it provides opportunities to human beings to shape themselves.
- People are adaptive in nature. They adapt themselves in different places and in different habitat on earth.

The French historian Lucien Fabvre explained the concept of possibilism by saying that, 'When possibilism relates with human behaviour to their environment, there are no necessities but everywhere possibilities.'

Possibilism lays emphasis on thoughts, actions and ability to cope with environment and control one's own destiny.

### Main Conclusions

- Possibilism does not accept the influence of environmental factors in human life.
- Environment does not play any role in the development of culture.
- It provides choices to human beings to adapt and show their responses.
- Man is the main partner of the environment and he moulds his surroundings according to his needs.
- Man makes many changes and modifications in environmental conditions according to his needs to fulfil his demands.
- A physical environment provides opportunity to human beings to act.
- The physical and social environment creates many chances and possibilities for human beings to choose freely and respond.
- Possibilism is a philosophy which explains the relationship between man and environment.
- The concept of possibilism accepts man as an active agent of environment.
- It asserts that the natural environment provides many options as knowledge and technology of cultural group increases.
- There are three reasons:
  (a) Industrial revolution
  (b) Agricultural Advancement
  (c) Technological revolution

### Industrial Revolution

Increased demand for basic necessities due to rapid growth of population in India led to the Industrial Revolution. Industrial Revolution started way back in 1960s when India was struggling from the problems of poverty, unemployment and over population. The emergence of newer technologies helped India to become a self-reliant state.

Though it was a remarkable achievement for the Indian economy, it also gave birth to various environmental concerns like pollution, global warming, urbanization, deforestation, creation of slums and deteriorated living conditions.

### Agricultural Advancement

India is an agricultural country. With the advent of 1947, the Indian economy was hugely dependent on the agriculture sector. With 70 per cent of national income obtained from this sector, agriculture also witnessed a lot of advancement since its onset. To fulfill the increasing demands of food, the use of fertilizers and pesticides, modern irrigation methods, green revolution and organic farming methods have been adopted by the Indian farmers so as to increase the yield of crops.

No doubt, there is a great increase in the productivity; simultaneously it is inversely affecting the environment. Acid rains, soil erosion, adulteration, soil degradation, disturbance in monsoon cycle affect the growth of agriculture.

### Technological Revolution

The world has witnessed drastic changes in the past few years; the lifestyle of people has been affected greatly. Due to the emergence of new technologies, the modern societies are thriving to get the edge of the newest up gradation.

Today the use of computers, television, internet and modern means of transport has reduced the distance across the globe but it has widened the gap among human beings. Not only the physical environment but also the social and the psychological environment is getting affected.

## 1.2.5 Neo-determinism

Taylor, in 1920s put forward the concept of neo-determinism. He believed that agricultural production mostly depended on the physical environment. As agriculture is affected by physical nature of environment the economy of the country is also affected. Thc producers of agricultural products are the main agents who play an important role in the economical progress of the country.

Man is the main source of development who is capable of bringing about significant changes in a country's development by changing the rate and direction of progress.

Environment offers several opportunities to man to select his actions either wisely or foolishly. He therefore has the wisdom to not take actions which will act against the environment.

Nature has two phenomena in common 'possible and impossible.'

Environment does not provide equal chances to everyone. Sometimes, very little amount of possibilities of actions are found; sometimes harsh struggles resulting in more or less amount of production.

Nature never decides and never gives any clue to human beings to show its preferences of actions. It is not clear which action will be accepted by the nature.

The concept of determinism accepts that man is not a free agent of nature and he has no freedom to decide his actions. On the other hand, the concept of neo-determinism agrees that man is a free agent of nature, he is free to choose his actions, he is free to take decisions and free to select alternative actions.

He has limitless possibilities out of which he selects his best actions. His actions are determined wisely to achieve the goals.





When we compare determinism, possibilism and neo-determinism, we reach to the conclusion that:

- **Determinism** is the concept which explains that nature affects the physical, mental and moral mind sets and habits of mankind and determines the culture and behaviour of the individuals and the society. Further, it suggests that whatever the actions, the actions of the individuals are already predetermined.
- **Possibilism** is that concept which suggests that man decides his actions according to the possibilities he finds from the environment. His actions determine the culture. He has limitless possibilities out of which he can select according to his needs and demands.

On the other hand, neo-determinism believes that environment provides many chances to man out of which he has to select his actions by using his wisdom. The opportunities are not equal for all but only wise people can select the best actions to reach their goals.

### Check Your Progress

1. Define nomological determinism.
2. What is Fatalism?
3. List the factors affecting determinism.
4. What does possibilism emphasise on?
5. What do you understand by the concept of neo-determinism?

# 1.3 INTRODUCTION TO ENVIRONMENTAL EDUCATION

Environmental education is an important segment within the educational system. In many countries government supported programmes are constituted which are pursued by social groups, scientific community and educational institutions.

The main objectives of such programmes are:

- To overcome the environmental crisis
- To understand the factors, causes and find solutions to the environmental problems
- To evaluate and analyse problems in the management of natural resources
- To evaluate the success and failure in implementing educational tasks
- To develop ability to assess environmental situations which are leading to environmental damages
- To develop relationship between social, economic and physical factors which are mutually responsible for various negative outcomes
- To provide feedback for the future generation
- To define economy and set up the limits of the use of natural resources
- To make behavioural changes in everybody's life as a consumer, industrial producer, employee, citizen, policymaker, traveller, tourist, farmer, or student
- To integrate Gandhian principles and values as a part of environmental education

NOTES

## 1.3.1 Need for Environmental Education

The pursuit of sustainable development and environmental conservation policies, objectives and targets requires the public to be sufficiently sensitized about the multiple dimensions of environment and development. Awareness and understanding of environmental issues provide the basis and rationale for commitment and meaningful action towards environmentally sound and sustainable development.

Environmental education is now being seen as an instrument and a process that enables participation and learning by people of all ages, based on two-way communication rather than the old paradigm of a one-way flow of information, from teachers to pupils. The content and substance of environmental education is also undergoing review and change. Reorienting education as a whole towards sustainability involves the various levels of formal, non-formal and informal education at all levels of society. Environmental education has developed within the conceptual framework that emerged from the first international conference in Tbilisi (1977) and is now seen as education for sustainability. This allowed environmental education to address the broad range of issues and concerns included in *Agenda 21* and others which evolved through the meetings of the Commission on Sustainable Development (UNESCO 1997).

The key international conventions on environment place a high value on public awareness, education and training and obtaining information through monitoring as essential elements for the success of the conventions. For example, the Convention on Biological Diversity emphasizes the importance of public education and awareness through promoting and encouraging measures required for the conservation of biological diversity.

Since the convention came into force in December 1995, the contracting parties (countries) have been motivated to address issues related to education and awareness on biodiversity.

In addition, countries in the region recognize the immensity of the challenges they face, and of the vital role that environmental education can play in meeting these challenges. There is a growing perception by governments for the need to integrate environmental education information and communication into the country's on-going programmes. As a result of the *Agenda 21*, the level of cooperation and collaboration between environmental and the educational institutions has increased. In some countries, governmental environmental agencies have statutory requirements to engage in activities related to environmental education and awareness.

For example, the Malaysian Department of Environment has established an educational division under the Environmental Quality Act, which is actively engaged in promoting and implementing a variety of activities.

In many countries of the Asian and the Pacific Region environmental topics have been included in education courses, through integrating environmental concerns in other subjects and through specific courses for the environment. Government, NGOs, educational institutions and media have undertaken some serious efforts to meet the growing environmental challenges by promoting environmental education, information and communication in their respective countries. Activities such as green bank, green press, eco-clubs, eco-policies, eco-farming and eco-harvesting; are emerging in the region. Special economic incentives (such as subsidy, tax-exemption and other incentives) are provided to schools in some countries where environmental education courses are offered.





NOTES

There is greater recognition of the role of NGOs and civil society organizations, and the need for meaningful community participation in debates and action programmes aimed at education and training for sustainable development. NGOs and governments are increasingly working together, reinforcing each other's strengths and outreach.

Linkages between governmental institutions and NGOs are improving in most countries of the region, and in some cases, governments are actually depending on mature and experienced NGOs to promote environmental awareness, communication, and training activities.

## 1.3.2 International Meets of Environmental Educations

### 1. Stockholm Conference

Environmental education (EE) gained international recognition in 1972 with the UN Conference on the Human Environment, in Stockholm, Sweden, which called upon environmental education as the means to address environmental issues worldwide. The Conference considered the need for a common outlook and for common principles to inspire and guide the peoples of the world in the preservation and enhancement of the human environment. It proclaimed that:

- Man is both creature and moulder of his environment, which gives him physical sustenance and gives him the opportunity for intellectual, moral, social and spiritual growth. In the long and tortuous evolution of the human race on this planet, a stage has been reached when, through the rapid acceleration of science and technology, man has acquired the power to transform his environment in countless ways and on an unprecedented scale. Both aspects of man's environment, the natural and the man-made, are essential to his well-being and to the enjoyment of basic human rights— the right to life itself.
- The protection and improvement of the human environment is a major issue which affects the well-being of people and economic development throughout the world. It is the urgent desire of the people of the world and the duty of all the governments.
- Man has constantly to sum up experience and go on discovering, inventing, creating and advancing. Man's capability to transform his surroundings, if used wisely, can bring to all people the benefits of development and the opportunity to enhance the quality of life. Wrongly or heedlessly applied, the same power can do incalculable harm to human beings and the human environment. We see around us growing evidence of man-made harm in many regions of the earth: dangerous levels of pollution in water, air, earth and living beings; major and undesirable disturbances to the ecological balance of the biosphere; destruction and depletion of irreplaceable resources; and gross deficiencies, harmful to the physical, mental and social health of man, in the man-made environment, particularly in the living and working environment.
- In the developing countries most of the environmental problems are caused by under-development. Millions continue to live far below the minimum levels required for a decent human existence, deprived of adequate food and clothing, shelter and education, health and sanitation. Therefore, the developing countries must direct their efforts to development, bearing in mind their priorities and the need to safeguard and improve the environment. For the same purpose, the industrialized countries should make efforts to reduce the gap themselves and the developing

NOTES

countries. In the industrialized countries, environmental problems are generally related to industrialization and technological development.

- The natural growth of population continuously presents problems for the preservation of the environment, and adequate policies and measures should be adopted, as appropriate, to face these problems. Of all things in the world, people are the most precious. It is the people that propel social progress, create social wealth, develop science and technology and, through their hard work, continuously transform the human environment. Along with social progress and the advance of production, science and technology, the capability of man to improve the environment increases with each passing day.
- A point has been reached in history when we must shape our actions throughout the world with a more prudent care for their environmental consequences. Through ignorance or indifference we can do massive and irreversible harm to the earthly environment on which our life and well being depend. Conversely, through fuller knowledge and wiser action, we can achieve for ourselves and our posterity a better life in an environment more in keeping with human needs and hopes. There are broad vistas for the enhancement of environmental quality and the creation of a good life. What is needed is an enthusiastic but calm state of mind and intense but orderly work. For the purpose of attaining freedom in the world of nature, man must use knowledge to build, in collaboration with nature, a better environment. To defend and improve the human environment for present and future generations has become an imperative goal for mankind-a goal to be pursued together with, and in harmony with, the established and fundamental goals of peace and of worldwide economic and social development.
- To achieve this, environmental goal will demand the acceptance of responsibility by citizens and communities and by enterprises and institutions at every level, all sharing equitably in common efforts. Individuals in all walks of life as well as organizations in many fields, by their values and the sum of their actions, will shape the world environment of the future.
- Local and national governments will bear the greatest burden for large-scale environmental policy and action within their jurisdictions. International cooperation is also needed in order to raise resources to support the developing countries in carrying out their responsibilities in this field. A growing class of environmental problems, because they are regional or global in extent or because they affect the common international realm, will require extensive cooperation among nations and action by international organizations in the common interest.

## 2. Tbilisi Conference

In 1975, in pursuance of the above recommendation of the United Nations Conference on the Human Environment (Stockholm, 1972) UNESCO and the United Nations Environmental Programme (UNEP) launched the International Environmental Education Programme (IEEP). In 1977 the Intergovernmental Conference on Environmental Education (Tbilisi, USSR), considering that there was a sharply felt need in all countries for international cooperation in this field, called upon UNESCO and UNEP to continue their efforts to further the development of this education within the international community.

Environmental education (EE) is included among the objectives of UNESCO's Medium-Term Plan for 1977-1982, which was approved by the UNESCO General Conference at its nineteenth session (Nairobi, 1976).





NOTES

The Declaration and Recommendations of the Tbilisi Conference made it possible to define the nature, objectives and pedagogical principles of environmental education and to establish broad guidelines for action in this field at the national and international levels. Since the Tbilisi Conference, the environment has been seen as a whole, simultaneously comprising natural aspects and those that result from human action. Environmental Education is viewed as a dimension of the subject matter and practice of education directed towards the solution of practical environmental problems through an interdisciplinary approach and the active and responsible involvement of each individual and of the community.

The Tbilisi Conference considered that EE should be made an integral part of the entire educational process and aimed at every category of the population such as:

- General public and non-specialists
- Socio-occupational categories whose activities have a significant impact on the environment
- Scientists and technicians whose fields, whether in the natural or the social sciences concern the environment and who need to receive specialized training.

## 3. The Earth Summit

The Earth Summit in Rio de Janeiro was unprecedented for a UN conference, in terms of both its size and the scope of its concerns. Twenty years after the first global environment conference, the UN sought to help Governments rethink economic development and find ways to halt the destruction of irreplaceable natural resources and pollution of the planet. Hundreds of thousands of people from all walks of life were drawn into the Rio process. They persuaded their leaders to go to Rio and join other nations in making the difficult decisions needed to ensure a healthy planet for generations to come.

The Summit's message — that nothing less than a transformation of our attitudes and behaviour would bring about the necessary changes — was transmitted by almost 10,000 on-site journalists and heard by millions around the world. The message reflected the complexity of the problems facing us: that poverty as well as excessive consumption by affluent populations place damaging stress on the environment. Governments recognized the need to redirect international and national plans and policies to ensure that all economic decisions fully took into account any environmental impact. And the message has produced results, making eco-efficiency a guiding principle for business and governments alike.

- Patterns of production — particularly the production of toxic components, such as lead in gasoline, or poisonous waste — are being scrutinized in a systematic manner by the UN and Governments alike.
- Alternative sources of energy are being sought to replace the use of fossil fuels which are linked to global climate change.
- New reliance on public transportation systems is being emphasized in order to reduce vehicle emissions, congestion in cities and the health problems caused by polluted air and smog.
- There is much greater awareness of and concern over the growing scarcity of water.

The two-week Earth Summit was the climax of a process, begun in December 1989, of planning, education and negotiations among all Member States of the United

Nations, leading to the adoption of 'Agenda 21', a wide-ranging blueprint for action to achieve sustainable development worldwide. At its close, Maurice Strong, the conference secretary-general, called the summit a 'historic moment for humanity'. Although Agenda 21 had been weakened by compromise and negotiation, he said, it was still the most comprehensive and, if implemented, effective programme of action ever sanctioned by the international community. Today, efforts to ensure its proper implementation continue.

The Earth Summit influenced all subsequent UN conferences, which have examined the relationship between human rights, population, social development, women and human settlements — and the need for environmentally sustainable development. The World Conference on Human Rights, held in Vienna in 1993, for example, underscored the right of people to a healthy environment and the right to development, controversial demands that had met with resistance from some Member States until Rio.

### 1.3.3 Definitions of Environmental Education

'Environmental Education is a way of implementing the goals of environmental protection. It is not a separate branch of science of field of study. It should be carried out according to the principle of life-long integral education.' — Finnish National Commission Education, UNESCO (1976) Seminar at Jammi, 1974.

According to Mishra (1993), 'Environmental Education appears to be a process that equips human with awareness, knowledge, skill, attitude and commitment to improve environment.'

International working meeting on environmental education in the school curriculum, Paris UNESCO, 1979: 'Environmental Education is the process of recognizing values and clarifying concepts in order to develop skill and attitude necessary to understand and appreciate the interrelatedness among man, his culture and his bio-physical surroundings. It also entails practice in decision making and self formulation of a code of behaviour about problems and issues concerning environmental quality.'

According to Cook and Hearu (1971), 'Environmental education is problem centered, interdisciplinary, value and community oriented, and concerns with man's survival as species, based on student initiated activities and involvements.'

As per R.A. Sharma (1996), 'Environmental education refers to the awareness of physical and cultural environment and perceives its relevance for real life situations. The problems and issues are to be identified. The imbalances of environment are to be improved in view of sustainable development.'

Reviewing all the definitions, environmental education can be summarized as:

- A way to meet the goals of environmental protection.
- A process by which one develops awareness about environment.

Environment Education is significant because of the following reasons:

- Comprises of a learning process that increases people's knowledge and awareness about associated challenges
- Develops the necessary skills and expertise to face challenges
- Facilitates better attitude, motivations and commitments to take responsible action
- Enhances critical thinking, problem solving and effective decision-making skills
- Enables individuals to calculate various sides of environmental issues





- Encourages inquiry and investigation
- Ensures literate individuals to make healthy citizen and community
- Improves everyday life by protecting human health
- Encourages expansion of natural resources
- Establishes ecological equilibrium which explains proper use and conservation of resources
- Controls environment pollution
- Understands the importance of balanced environment and remedial measures for checking the imbalances of environment

Apart from this, some more objectives of environmental education have been chalked out by various international seminars and conferences.

- 'To create an awareness and an understanding of the evolving social and physical environment as a whole, its natural, manmade, cultural, spiritual resources, together with the rational use and conservation of these resources for development.' – Report of a conference of African educators, EDC and CREDO, Nairobi, African Social Studies programmes, 1968.
- 'In order to enable people to enjoy good health and a high quality of life, it is vital to prevent harmful effects to human health or damage to the environment caused by pollution of air, water, and soil, noise, vibration, noxious, smells, etc., caused by firms and individuals. The environment includes animals and plants and their ecological systems which are closely bound to the livelihood of people.' – National Anti Pollution Law, Japan, 1968.
- Environmental Education is an integral part of the education process. It should be centered on practical problems and be interdisciplinary in character. It should be aimed at building up a sense of values, contribute to public well being and concern itself with the survival of the human species. Its force should reside mainly in the initiative of the learners and their involvement in action and it should be guided by both immediate and future subjects of concern – Final report of the Tbilisi Conference, 1977.

### 1.3.4 Nature of Environmental Education

Environmental education is significant because of the following reasons.

- Action against real problems
- Interdisciplinary in nature
- Solution for environmental situations and problems
- Modification of values in relation to environment
- Development of skills and attitude
- A continuous process
- An educational experience which provides solution for environmental problems
- Newly created field for all socio-professional groups
- Vital to prevent harmful effects to human health
- Relationship between man, its culture and biophysical environment
- Decision-making practice

NOTES

- Self-formulation of a code of behaviour
- Not a separate branch of science
- An integral part of the educational process
- Formal as well as informal
- For all age groups
- A style and subject matter of education

### 1.3.5 Nature and Scope of Environmental Education

Environmental education is the need of the day. It is a part of education for society in the developed, developing and least developed countries. It strives to improve things through environment, about environment and for environment.

The scope of environmental education is designed under two categories:

(i) Scope in terms of subjects

(ii) Scope in terms of environmental issues and subject matter

According to Tbilisi conference, environmental studies as a subject has immense opportunity. It includes a variety of subjects and arenas which can be listed as:

- Maintenance and protection of natural resources
- Natural science and biodiversity
- Management and reduction of environmental pollution
- Community related issues with respect to development and environment
- Human population and environment

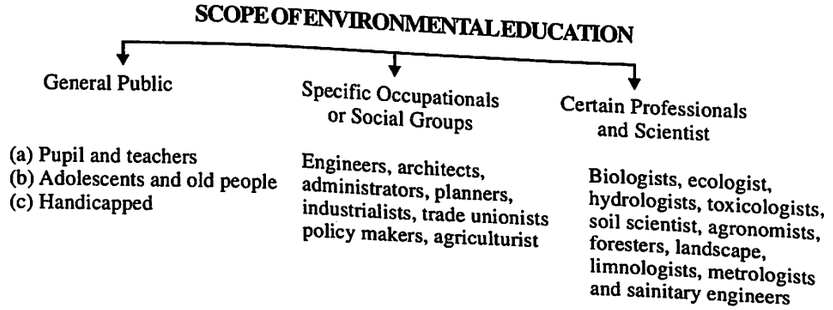



*Fig. 1.2 Scope of Environmental Education for Different Categories of Individuals*

These are the fundamental characteristics of environmental education which have an immediate influence on society. Environmental Studies are also at times, highly focused on more technological features like environmental science, environmental engineering or environmental management.

In modern times, the range of environmental studies has increased significantly. A number of career opportunities have become known in these fields that are largely classified as:

**(i) Research and Development (R&D) in Environment:** Proficient environmental scientists play a significant role in investigating numerous environmental problems in a scientific manner. In this manner, they are able to perform R & D activities for developing cleaner technologies and ensuring that the present development is able to meet the needs of the current generation without compromising on the needs of the future generations. Environmental management and environmental engineering are emerging as new career opportunities for environmental protection and management. In India the pollution control boards (PCB) are taking stringent action to execute pollution control laws.

**(ii) Green Advocacy:** Environment Studies as a subject now needs to have advocates since several Acts and Laws related to environment have been implemented. Advocates will need to fight for cases related to water and air pollution, forests and wildlife.

**(iii) Green Marketing:** We now find products in the market which have ISO 14001 Certification. This certification implies that the products are environment friendly and will not adversely affect the environment. As a result, environmental auditors and environmental managers are the emerging career opportunities in the coming years.

**(iv) Green Media:** In the age of technology, awareness about the environment can be easily spread not only by television, radio, newspapers but also through the Internet, magazines, hoardings and advertisements.

**(v) Environment Consultancy:** A lot of non-government organizations (NGOs), corporate bodies and government organizations are hiring the services of environmental professionals for thoroughly studying and confronting environment related problems.

### Universal vs Local Nature of Environment

Environment is one focus that is both global and local in nature.

Issues like global warming, diminution of ozone layer, declining forests and energy resources, loss of diverse plants and animals at the global level are some of the problems which are going to have a direct and indirect influence on human beings at the global level.

However, there are some environmental problems which have to be handled at the local level. For example, impact of mining, or hydroelectric project in an area, difficulty in disposal and management of solid waste, pollution of water bodies, soil erosion, water logging, and salinization of soil, and arsenic pollution of ground water have to be handled at the local level.

**Individualistic Nature of Environment:** Environmental studies is an indispensable subject matter. It deals with the most commonplace problems of life which concern every human being such as provision of safe and clean drinking water, clean living conditions, fresh air, fertile land, healthy food and sustainable development. If we want to lead a healthy life, live long with less number of health problems and preserve the same for the future generations, it is most essential to understand the basics of environment.

Sustainable development requires public-private partnership. However, the public can be encouraged to participate only when they are made conscious about the environmental issues.

All individuals should be made conscious of their duty to keep the environment neat and clean. This will ensure that the environment is conserved and preserved for a better tomorrow.

NOTES

## Check Your Progress

6. What is the significance of environmental education?
7. List the career options that have emerged in the field of environmental studies.

## Did You Know

Van Mahotsav is an annual pan-Indian tree planting festival which takes place for a week in the month of July. During this event millions of trees are planted.

## ACTIVITY

Find out the reason as to why the construction of wooden houses has been replaced with concrete houses in the hilly stations making them extremely prone to earthquakes and other natural calamities.

## 1.4 SUMMARY

In this unit, you have learnt that:

- Environment is the life support system on which the existence and perpetuation of all living organisms depend. The present day environment can be considered to have physical, chemical, biological, scientific and technological components in which the organisms remain embedded.
- Environmental Education is an important segment within the educational system. In many countries government supported programmes are constituted which are pursued by social groups, scientific community and educational institutions.
- Education is preparation for an adaptation to the mechanical life and workplace for active participation in confronting the problems created by human causes as well as natural causes itself.
- Environmental Education is the need of the day. It is a part of education for society in the developed, developing and least developed countries. It strives to improve things through environment, about environment and for environment.
- Environment Studies as a subject now needs to have advocates since several Acts and Laws related to environment have been implemented. Advocates will need to fight for cases related to water and air pollution, forests and wildlife.
- Issues like global warming, depletion of ozone layer, dwindling forests and energy resources, and loss of global biodiversity will have a direct and indirect effect on mankind on a global level.
- Environment is made up of biotic and non biotic agents and they have interaction between them. Humans are different because they have their wishes, interest and will.





NOTES

- Human beings are the part of environment and thus, they have to follow the rules of nature and laws of science. If we feel that whatever one does is already decided then there is no blame on the events that takes place. In this respect the determinism is found to be true.
- The hypothetical views of theory of physics explain the presence of small particles in the universe and their interactions. The present theory helps in defining the different aspects involved in determinism.
- Free will can be compared with determinism. The other views state that determinism cannot be compared with free will. Some have an opinion that when any event is held by determinism, free will cannot exist.
- Causal Determinism explains the law of cause and effect. Whenever there is a cause there will be an action and action will produce an effect as a response to it.
- Nomological Determinism is a combination of past status of universe and the natural laws which decides the events of future.
- Necessitarianism is a metaphysical concept which infers that every event takes place with certain causes and whatever happens has a cause and reason.
- The Weak theological determinism explains that whatever happens is already known to God and future is fixed.
- Logical determinism explains that whatever the idea formed behind the present, past and future will be either true or false.
- Environmental determinism is also known as climatic or geographical determinism. According to this form of determinism, the physical and social conditions of environment design, the culture patterns of an individual decide their behaviour.
- When an affectionate bonding is developed among individuals, a group is formed. For example, family is a group. Families unite together to form a social group, ultimately, becoming a society.
- Explication implies getting knowledge about the experiences, situations, signals or stimulations obtained from the environment.
- Possibilism explains the relationship between the human and physical environment. Humans have a specific ability to adjust with the environment by modifying their responses.

## 1.5 KEY TERMS

- **Abiotic:** It is a biological term that means nonliving or not alive.
- **Possibilism:** It is a theory of geographical culture that explains that environment has certain limitations. Its culture is defined by the actions of human beings.
- **Determinism:** It is the concept which explains that nature affects the physical, mental and moral mind sets and habits of mankind and determines the culture and behaviour of the individuals and the society.
- **Adhibition**: It means the actions, and responses which are taken in use. These responses are used to control the situation and get perfection to fulfill the requirement.

- **Inhibition:** It means avoiding the present situation.
- **Nomological Determinism:** This type of determinism is a combination of past status of universe and the natural laws which decides the events of future.
- **Necessitarianism:** It is a metaphysical concept which infers that every event takes place with certain causes and whatever happens has a cause and reason.

## 1.6 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Nomological determinism is a combination of past status of universe and the natural laws which decides the events of future. This form of determinism suggests that the past and present events combine to design the future by obeying the natural laws.
2. Fatalism believes in the destiny of an individual. It explains that whatever events take place in an individual's life depend on his fate and human actions cannot control it.
3. Some of the factors affecting determinism are:
   - Interrelationship among individuals
   - Grouping
   - Continuous existence
   - Likings or disliking
   - Infirmity and mortality
   - Coping Strategies
4. Possibilism lays emphasis on thoughts, actions and ability to cope with environment and control their own destiny.
5. Taylor, in 1920s put forward the concept of neo-determinism. He believed that agricultural production mostly depended on the physical environment. As agricultural is affected by physical nature of environment the economy of the country is also affected. The producers of agricultural products are the main agents who play an important role in the economical progress of the country.
6. Environment Education is significant because it,
   (i) Comprises a learning process that increases people's knowledge and awareness about associated challenges.
   (ii) Develops the necessary skills and expertise to face challenges.
   (iii) Facilitates better attitude, motivations and commitments to take responsible action.
   (iv) Enhances critical thinking, problem solving and effective decision-making skills.
   (v) Enables individuals to calculate various sides of environmental issues.
7. The career options that have emerged in the field of environmental studies are:
   (i) Research and Development (R&D) in Environment
   (ii) Green Advocacy
   (iii) Green Marketing
   (iv) Green Media
   (v) Environment Consultancy



## 1.7 QUESTIONS AND EXERCISES



### Short-Answer Questions

1. Explain the meaning of environment.
2. Define environmental education.
3. List the characteristics of environmental education.
4. Write short notes on (a) Possibilism (b) Neo-determinism.

### Long-Answer Questions

1. Describe the nature and scope of environmental education.
2. Explain the concept of determinism.
3. Describe the different types of determinism.
4. What factors influence determinism?
5. Discuss the need for environmental education.
6. Describe how international bodies have tried to deal with environmental education.

## 1.8 FURTHER READING

Bell, D.; *The Coming of Past Industrial Society*, Arnold Heinman Publication, New Delhi, 1974.

Bhatia, S.C (ed).; *Papers in Environmental Education*, IUACE, New Delhi, 1984.

Carson, R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

Chakraborty, S.C. (ed); *Value Orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Grossland, R.W., & Moor, S.F.D.; *Environmental Studies Project: An Evaluation Report,* Macmillan, London, 1974.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.

# UNIT 2 ENVIRONMENTAL RESOURCES

NOTES

**Structure**


2.0 Introduction
2.1 Unit Objectives
2.2 Natural Resources
  2.2.1 Classification of Natural Resources
2.3 Land Resources
2.4 Air Resources
  2.4.1 Air Pollution
2.5 Water Resources
2.6 Forest Resources
2.7 Mineral Resources
2.8 Food Resources
2.9 Energy Resources
2.10 Role of Individuals in the Conservation of Natural Resources
2.11 Cultural Resources
  2.11.1 Obstacles of Cultural Harmony
  2.11.2 Specimens of Art/Architecture
  2.11.3 Protection of Monuments
  2.11.4 Indian Architecture
  2.11.5 Protection and Promotion of Cultural Resources
2.12 Summary
2.13 Key Terms
2.14 Answers to 'Check Your Progress'
2.15 Questions and Exercises
2.16 Further Reading


## 2.0 INTRODUCTION

The word 'environment' is derived from the French word *environ*, which means 'to surround' or 'around' and is referred to as the external conditions in which an organism lives. Hence, environment can be defined as the whole of physical, chemical and biological factors, which work upon living beings or a natural community and decide its structure and nature of survival.

Living and non-living entities together comprise the natural environment making human beings an essential component of the environment. Man is the most advanced creature of all living beings and is considered to be a social animal. Hence, one can say that man lives in a socio-cultural environment that either directly or indirectly has an influence on him. In turn, human beings also alter or vary the nature of environment according to their requirements. However, it should be noted that these changes are not always advantageous.

The environment does not remain constant for any living creature; it changes with time as well as it changes from place to place. Human beings live in a condition of vigorous stability with the environment. Hence, every living creature has to make certain alterations in response to the modifications in one or more environmental factor(s)

NOTES

such as temperature, humidity, pH, etc., in order to survive, grow, feed and reproduce. Plants and animals, just like human beings, draw nourishment from the environment and survive in its lap. They grow, develop, reproduce and ultimately perish in the environment.

Living beings react differently to the changes taking place in the environment. Some creatures are extremely vulnerable to even the least environmental change, while others are capable enough to adjust their metabolic processes and deal with these modifications. Living beings which could not deal with any modification in environment have either been wiped out or are on the verge of being destroyed.

Resources do not refer to a thing or a substance, but to a function which a thing or a substance may perform or to an operation in which it may take part, namely the function or operation of attaining a given end such as satisfying a want. Resource, therefore, is a means to attain the given ends. The aspect of satisfaction is so important that we consider a thing or a substance as resource, so long as it meets our needs.

Life on this planet depends upon a large number of things and services provided by nature, which are known as natural resources. Water, air, soil, minerals, coal, forests, crops and wild life are all examples of natural resources.

Any material which is required or used to sustain life or livelihood is termed as a resource. In other words, resources are all these requirements of organisms, population and communities which tend to help in the accumulation of energy by their increased availability. Some examples of resources are air for breathing, water for drinking, land for living and growing food, forests for timber and paper, ores for aluminium, copper, iron and other metals and coal, oil and natural gas for producing energy.

## 2.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the concept of natural resources
- Distinguish between renewable and non-renewable resources
- Discuss the important natural resources such as forest, water, minerals, food, energy and land resources
- Identify the role of an individual in the conservation of natural resources
- Discuss the cultural resources
- State the various steps that can be taken for the protection and promotion of cultural resources

## 2.2 NATURAL RESOURCES

According to Ramade (1984), a natural resource is defined as a form of energy and/or matter which is essential for the functioning of organisms, populations and ecosystems. In the case of humans, natural resource refers to any form of energy or matter essential for the fulfillment of physiological, socio-economic and cultural needs, both at the individual level and that of the community. Examples of natural resources are water, air, soil, minerals, coal, forests, crops and wildlife.





NOTES

The basic ecological variables—energy, space, time and diversity are sometimes together called natural resources. These natural resources maintain the ecological balance among themselves. Man is the only organism who has disrupted this delicate balance.

Resource is a means, which may or may not be material. It has specific functions and can be utilized to meet the needs of individual and society as a whole, in a given space and time.

Resources can be natural such as air, water and soil or they can be a human resource, such as population or a cultural resource like knowledge.

The generation of such important resources is hampered by various resistances such as, natural resistance like cyclone, flood, drought; human resistance like war, over- or under-population and cultural resistance like superstition and religious fundamentalism. Although, natural resistance cannot be controlled, the other two can and should be prevented in order to safeguard existence.

### Resistance

A material or energy, which creates disturbance at the time of formation of resource, is called 'resistance' and can be classified into three categories.

1. *Natural resistance: S*uch resistances come from natural processes, e.g., cyclones, floods, droughts, etc.
2. *Human resistance: S*uch resistances are man-made and can be prevented through scientific and logical measures, e.g., population increment or decrement, war, etc.
3. *Cultural resistance: S*uch resistances come from human society due to certain beliefs that may not be logical and are mainly caused due to illiteracy, e.g., superstitions.

Resource and resistance are interrelated as well as interdependent.

### Neutral Stuff

There are many materials in the world that can neither be termed as resources nor resistances. These materials are known as 'neutral stuff'.

The neutral stuff has functionality but no utility. For example, the materials of Antarctica has functionality but no utility. These materials can, therefore, be termed as neutral stuff because they cannot be utilized as a resource but at the same time do not create any resistance in the formation of other resources.

### Impact of Population Growth on Resources

Development and growth of population use natural resources to a large extent. However, since these resources are limited, they get depleted at an increasingly faster rate. This results in environmental degradation causing ecological imbalance.

### 2.2.1 Classification of Natural Resources

There are different classifications of natural resources. According to Odum (1971), natural resources can be divided into two categories, renewable and non-renewable resources. They can also have two further categories of Biotic/Abiotic and Inexhaustible Resources.

NOTES

## A. Renewable Resources

Resources that can be replenished through rapid natural cycles are known as renewable resources. These resources are able to increase their abundance through reproduction and utilization of simple substances. Examples of renewable resources are plants (crops and forests), and animals who are able to reproduce and maintain life cycles. Some examples of renewable resources which do not have life cycle, but can be recycled are wood and wood-products, pulp products, natural rubber, fibres (e.g., cotton, jute, animal wool, silk and synthetic fibres) and leather. In addition to these resources, water and soil are also classified as renewable resources. Water is no longer referred to as a renewable resource. This is because of its loss in natural replenishment due to global warming, increased deforestation and resulting disturbances in the hydrological cycle. Water's status of infinity is severely under threat. These resources may have a life-cycle. These can be replaced from time to time, such as plants and animals or those that do not have a life-cycle but can be recycled, for example, water. Replaceable renewable resources, such as plants and animals, if not managed properly, may not become available with the same speed and become extinct soon. On the other hand, these inexhaustible resources that are hardly affected by man's activities are abundantly available and expected to be so for millions of years. Solar energy, wind energy, atomic energy, etc., are examples of such kind.

The renewable resources are of two types:

1. *Conventional type*, such as water resources, plants and forests, wildlife, livestock, aqua culture, etc.
2. *Non-conventional type*, such as solar energy, wind energy, biogas, atomic energy, etc.

### 1. Conventional Type Resources

- **Water:** Water is essential for domestic use, generation of electricity, irrigation, navigation and also for living organisms. Currently, a lot of underground water is being used mainly for agricultural purposes, creating enormous load on the eco-system. Sufficient care needs to be taken to manage water efficiently. Water is a renewable resource and has a life-cycle (the hydrologic cycle) which should be properly maintained. However, due to large-scale deforestation the water cycle gets disturbed.
- **Forests:** Forests constitute 90 per cent of the global biomass. They are important as they regulate climatic conditions, such as rainfall, humidity, temperature and protect soil from erosion. Forests provide timber, fruits, medicine (medicinal plants); protect public health by absorbing contaminants of the environment and provide suitable habitats for a number of plant as well as animal species. Due to improper management, vast stretches of forests are lost every year. To compensate the loss of forest cover due to its diversion, afforestation should be done so that the net area under the forest cover remains the same. Only then can forests act as a renewable resource.
- **Wildlife:** Wild animals provide us meat for food, skin for leather goods and are used for research as well as recreational purposes. Human beings have killed millions of wild animals only to show their supremacy. The indiscriminate cutting of woods too has led to the extinction of at least one mammal and bird species every year. In order to make wildlife a renewable resource, proper management and awareness among people is very important.





NOTES

- **Livestock:** The livestock such as cattle, goats, buffaloes, sheep, horses, camels, as well as fowls, ducks and turkeys, provide meat, milk, eggs, skin, wool and also dung, which can be utilized as biogas and manure. Livestock can be utilized as renewable source only through proper management of their health, breeding and diet.
- **Aqua Culture as a Renewable Resource:** Fish, crabs, prawns, molluscs, etc., are very important sources of animal protein for human beings. The food proteins of marine animals are generally obtained from fish. Marine resources are: the seas numerous gulfs, rivers, lagoons, water lakes and other inland water resources. Fish is cultured in ponds, artificial enclosures and net pens by providing fertilizers like cow dung, domestic and agricultural waste and also animal excreta. The aqua culture production can be increased by using composite fish culture, *i.e.*, using the surface, middle and bottom for feeding fish in the same pond, avoiding competition among them for food.

### 2. Non-conventional Type Resources

- **Energy:** Although fossil fuels are non-renewable, they still form very slowly as compared to their consumption. Biomass although non-renewable can be made renewable by fuel-wood plantations. However, due to indiscriminate felling of trees, forests have depleted and fuel-wood has become scarce.
- **Solar Energy:** The main source of energy for the biological world is solar energy. The readily available solar radiations, particularly in tropical countries, can be trapped and converted to electrical energy, using devices such as a photo-cell. Thus, advanced researches for the development of efficient photovoltaic devices must be carried out to harness solar energy.
- **Wind Energy:** Wind energy can be converted into electrical energy by developing suitable technology. The electrical energy or electricity can solve energy problems in small towns or villages to a large extent. A common example of this usage is windmills that convert wind energy into mechanical energy for raising water from wells and rivers to the ground surface.
- **Wave and Tidal Energy:** Areas where rivers meet the sea, experience waves and tides. This enables the generation of large amount of electricity. Energy can also be generated by a natural or artificial water fall. The hydroelectric power thus generated turns a turbine fast, thereby generating electricity.
- **Geothermal Energy:** Hot springs are the contributors of geothermal energy as they have lot of steam. This steam can be utilized to run turbines in order to generate electricity.
- **Biogas:** The huge amount of cattle dung can be utilized for biogas production, which in turn can be used for cooking and to generate electricity.
- **Atomic Energy:** Radioactive elements are utilized to harness energy in the atomic reactors. The nuclear reactors produce an enormous amount of heat that is used to produce steam, which in turn is used to run turbines to generate electricity. Atomic energy is a very important source of energy. One kilogram of natural uranium (U238) generates energy equal to that generated by 35,000 kg of coal, which shows its tremendous potential.

As a special case, solar energy although having a finite life, is considered as a renewable resource in as much as solar energy stocks are inexhaustible on the human scale.

NOTES

## B. Non-renewable Resources

The resources that cannot be replenished through natural processes are known as non-renewable resources. These are available in limited amounts, which cannot be increased. These resources include fossil fuels (petrol, coal, etc.), metals (iron, copper, gold, silver, lead, zinc, etc.), minerals and salts (carbonates, phosphates, nitrates, etc.). Once a non-renewable resource is consumed, it is gone forever. Then we have to find a substitute for it or do without it.

As the name suggests, these resources cannot be reused or recycled. Examples of non-renewable resources are mineral deposits, soil, and fossil fuels like coal and petrol. These elements do not have a life cycle and have limited deposits. Such resources are available only in finite quantities and their rate of generation is so slow that they may be available only in minute quantities.

Some important non-renewable resources are as follows:

- **Mineral resources:** These are natural substances, both organic and inorganic. They may be in the form of ores such as iron (Fe), copper (Cu), zinc (Zn), manganese (Mn) and aluminium (Al). They serve various purposes, such as, manufacturing automobiles, ships, rail tracks and as components of glass and ceramics. Mineral products like coal and petroleum are used as energy resources as well. Minerals like uranium and thorium are very important for generation of atomic energy.
- **Oceanic resources:** Several minerals, such as, cobalt (Co), nickel (Ni), copper (Cu), and iron (Fe), which are found in the form of sulfides and oxides of manganese ($Mn_2O_3$), are found under the sea-level.
- **Land resources**: Land is used for multiple purposes, which needs no explanation. Although land and soil are non-renewable resources and the extent of exploitation of this resource is excessive, thought must be spared on its preservation.

Non-renewable resources can further be divided into two categories, viz. (a) recyclable and (b) non-recyclable.

(a) **Recyclable:** These are non-renewable resources which can be collected after they are used and can be recycled. These are mainly the non-energy mineral resources which occur in the earth's crust (e.g., ores of aluminium, copper, mercury, etc.) and deposits of fertilizer nutrients (e.g., phosphate stock and potassium and minerals used in their natural state (asbestos, clay, mica, etc.)

(b) **Non-recyclable:** These are non-renewable resources which cannot be recycled in any way. Examples of these are fossil fuels and uranium, which provide 90 per cent of our energy requirements.

## C. Biotic and Abiotic Resources

Some authors prefer to classify resources into biotic and abiotic resources.

(i) **Biotic resources:** These are living resources (e.g., forest, agriculture, fish and wild life) that are able to reproduce or replace them.

(ii) **Abiotic resources:** These are non-living resources (e.g. petrol, land, minerals, etc.) that are not able to replace themselves or do so at such a slow rate that they are not useful to consider them in terms of human life times.





NOTES

## D. Inexhaustible and Exhaustible Resources

Natural resources can also be classified as (a) inexhaustible and (b) exhaustible resources.

(i) **Inexhaustible resources:** Resources which are not changed or exhausted by man's activities and are abundantly available are said to be inexhaustible. Examples are solar energy, atomic energy, wind power, power from tides, etc. Most of the renewable resources are classified as inexhaustible but if not maintained properly, they become extinct. For example, ground water is renewable only if water continues to percolate in the soil at a rate at which it is removed.

(ii) **Exhaustible resources:** These resources are limited in nature and they are non-maintainable, e.g., coal, petrol and some minerals. Hence, they come under the non-renewable category.

If we continue to consume our resources at a rapid pace, then even our renewable resources will become non-renewable, leaving no scope for regeneration. For instance, if a species is exploited to such an extent that its population size declines below the threshold level, then there is a possibility that the species may become extinct.

We should protect and conserve our natural resources and use them in a prudent manner so that the resources are not exhausted. Natural resources should be used in such a manner so that our future generations are able to utilize them.

The following are some of the major natural resources:

- Forest resources
- Water resources
- Mineral resources
- Food resources
- Energy resources
- Land resources

### Check Your Progress

1. What is a natural resource?
2. Name the two categories of natural resources.

# 2.3 LAND RESOURCES

Land resources refer to a delineable area of the earth's terrestrial surface, encompassing all attributes of the biosphere immediately above or below this surface, including those of the near-surface, climate, the soil and terrain forms, the surface hydrology (including shallow lakes, rivers, marshes and swamps), the near-surface sedimentary layers and associated groundwater and geohydrological reserve, the plant and animal populations, the human settlement pattern and physical results of past and present human activity (terracing, water storage or drainage structures, roads, buildings, etc.) (FAO/UNEP, 1997).

Land is a finite and valuable resource upon which we depend for our food, fibre and fuel wood—the basic amenities of life. Soil is also a valuable resource.

NOTES

## Land degradation

Competing uses of land for forestry, agriculture, pastures, human settlements, and industries exert pressure on the finite land resource influencing land-use patterns and sometimes causing degradation. Changes in land use and land cover, and land degradation, have adverse impacts on forest resources and biodiversity. Given that they are intertwined in various ways, there is a need for treatment of land, forests, pastures, and biodiversity as an integrated resource.

India supports approximately 16 per cent of the world's population and 20 per cent of its livestock on 2.5 per cent of its geographical area. This pressure on land has led to its deterioration—soil erosion, water logging, salinization, nutrient depletion, lowering of groundwater tables, and soil pollution—largely caused by human interventions. Water erosion accounts for 45.3 per cent of the total land area, chemical deterioration 4.2 per cent, wind erosion 4.1 per cent, physical deterioration 3.5 per cent, and 5.5 per cent is not fit for agriculture and this is likely to continue—land under soil erosion rising from 166.0 million hectares (MHa) in 1997 to 189.0 MHa in 2019; water-logging, 12.7 to 22.3 MHa; and salinity, 11.0 to 15.1 MHa (Narayan and Ram Babu 1983).

According to the data provided by the National Remote Sensing Agency and Forest Survey of India based on satellite imagery, 80 MHa of 142 MHa under cultivation is substantially degraded and about 40 MHa of 75 MHa under the forest department has a canopy density cover less than 40% (Gadgil 1993). Nearly 11 MHa of pasturelands is substantially degraded, thus a total of 131 MHa representing about 40 per cent of the country's landmass, has productivity below its potential. However, according to the Wastelands Atlas of India 2000 (1:50 000 scale map), the total wastelands area covered in 584 districts is 63.85 million which accounts for 20.17% of the total geographical area. It is this figure of about 64 MHa that has been used in the projections.

Due to the increase in population, the demand for arable land for producing food and fuel wood is also increasing. Hence, there is more and more pressure on the limited land resources which are being depleted due to overexploitation. Soil erosion, waterlogging, salinization and contamination of the soil with industrial wastes like fly ash, press mud or heavy metals all cause degradation of land.

**Soil erosion:** Soil erosion means wearing away of soil. It is defined as the movement of soil components, especially surface-litter and top soil from one place to another. It results in the loss of fertility.

It is basically of two types, viz, normal erosion or geological erosion and accelerated erosion. The agents that cause such erosions are climatic agents and biotic agents.

Wind is also responsible for land erosion through saltation, suspension and surface creep.

In order to prevent soil erosion and conserve the soil, the following conservation practices are employed:

- Conservational till farming
- Contour farming
- Terracing
- Strip cropping
- Alley cropping





NOTES

- Wind breaks or shelterbelts
- Waterlogging

**Landslides:** Various anthropogenic activities like hydroelectric projects, large dams, reservoirs, construction of roads and railway lines, construction of buildings and mining are responsible for clearing of large forested areas.

**Desertification:** It is a process whereby the productive potential of arid or semiarid lands fall by ten per cent or more. Desertification is characterized by devegetation and loss of vegetal cover, depletion of groundwater, salinization and severe soil erosion. The causes of desertification are deforestation, overgrazing, mining and quarrying.

### Concerns

- Soil erosion has led to loss of topsoil and terrain deformation. Siltation, an off-site effect of erosion, is reducing the reservoir storage capacity by 1%–2% annually.
- Human-induced water logging is resulting in a rise in the water table.
- Salinization is likely to render more land unfit for biomass production, especially in the irrigated areas in Uttar Pradesh, Haryana, Punjab, Rajasthan, and Karnataka.
- Most regions have a net negative balance of nutrients and suffer from a gradual depletion in the level of organic matter, a trend that is likely to continue. Maintaining the nutrient balance and preventing nutrient deficiencies is a major concern given that the required demand for food production will have to be met through increased intensity of cropping (Sehgal and Abrol 1994).
- Over-extraction far exceeding recharge in areas where groundwater is mostly used for industrial and agricultural purposes, has led to progressive lowering of water table affecting the economy of water in use and the environment.
- Improper and indiscriminate use of agrochemicals and untreated sewage sludge and municipal wastes has led to the pollution of soil and water with toxic substances and heavy metals.

### Directions, innovations and strategies to combat land degradation

The following strategies are suggested:

#### *Short-term*

- *Assessment of land degradation:* Assessment of the nature and extent of degradation using scientifically sound criteria, indicators, and techniques will help plan appropriate reclamation measures. The SOTER (Soil and Terrain) database and GLASOD (Global Assessment of Human-induced Soil Degradation) can be helpful along with rapid inventorying using remote-sensing techniques and GIS (geographical information system).
- *Improvement of degraded land:* There is a need for adopting location-specific soil and water conservation measures to arrest further deterioration and for following practices that suit local conditions to restore the productivity of degraded lands. A multi-level stakeholder approach for the planning process is essential to obtain socially balanced results in which both the economic and ecological objectives are given due weightage. This requires data about the properties of the land, different types of land-use options and their effect on the resilience of ecosystems, and technology transfer and training of farmers, especially small and marginal farmers.

NOTES

### *Short- and medium-term strategies*

- *Revamping agricultural extension:* 'Lab [oratory]-to-land' concept should be put into practice by providing land-users multidisciplinary technical information and viable land-use options and alternatives identified for various agro-ecological and socioeconomic units. Crop combinations/rotations suitable for different agro-ecological regions (as suggested by the Indian Council of Agricultural Research) need to be advocated for better land management.
- *Waste management:* Domestic and municipal wastes, sludge, pesticides, industrial wastes, etc. need to be used with caution to avoid polluting the soil with heavy metals and other toxic substances.

### *Medium-term strategies*

- *Nutrient deficiency monitoring:* Projected increase in cropping intensity and consequent nutrient depletion make it necessary to develop a system of monitoring mechanism for soil nutrients. Fertilizer use will need to be optimized.
- *Land and water management:* Effective management and rational utilization of land and water resources for optimum production with minimum hazard to resources is possible treating natural watershed as a unit. In rain fed areas, *in situ* soil and moisture conservation on mini-watershed basis, irrespective of the ownership of land, should be a major thrust area for increasing productivity.
- *Discouraging shifting cultivation with short fallow periods:* Shifting cultivation, a traditional practice responsible for large-scale land degradation due to shortened fallow cycle, should be discouraged and alternatives provided.

## 2.4 AIR RESOURCES

Air is a precious resource which is mostly underestimated by human beings. Air supplies us with oxygen, which is essential for our bodies to live.

The thick, gaseous cover of air surrounding the earth is called atmosphere. It sustains life on earth by removing dangerous cosmic and ultraviolet rays through absorption, provides oxygen for respiration and carbon dioxide for photosynthesis. Hence, in this manner atmosphere is able to support life on earth.

The atmosphere can be divided into five types on the basis of temperature rise or fall.

(*a*) Troposphere
(*b*) Stratosphere
(*c*) Mesosphere
(*d*) Thermosphere
(*e*) Magnetosphere

- Air is a renewable resource replenished by natural processes.
  - o Oxygen, for example, is produced by plants.
  - o Air can also be cleansed by natural processes, such as rain.
- But air quality is changed by human and natural processes (the latter including volcanoes, forest fires)





NOTES

### 2.4.1 Air Pollution

The major sources of air pollution are motor vehicles, industries, thermal power plants, and domestic fuels. It would be useful to study the impact of the sectors on the air quality and then consider strategies that would lead to an alternative scenario with better air quality.

- **Domestic and commercial sectors:** Fuel combustion from domestic sources is a major source of indoor air pollution with about three-quarters of all Indian households using unprocessed biomass as the primary fuel, mostly for cooking (Census of India 1991). Emissions from traditional fuels in the residential sector are estimated under the BAU scenario. Urbanization and economic development will result in a shift towards cleaner gaseous fuel, and emissions from the residential sector will decrease. However, due to their significant health impacts, adequate measures need to be taken to reduce indoor air pollution.
- **Transport sector:** Transport is the major source of air pollution in many cities with road transport being the predominant source. The critical issues of this sector include increasing number of vehicles (annual growth of 10% or more), outdated engine technology and old vehicles, fuel quality, and inadequate traffic planning. Emissions of major pollutants are estimated for urban areas under the BAU scenario (Table 19) based on the projections of the number of vehicles, which considered the population growth and economic development.
- **Manufacturing industry:** Air pollution in terms of SPM loads has been analysed for some of the resource-intensive and highly polluting industries: copper, aluminium, steel, cement, fertilizers, textiles, and PVC (poly vinyl chloride) (Table 19). Emission loads have been worked out on the basis of emission load per unit of output from these industries (WHO 1993). The extent of installed pollution control systems in these industries has been estimated by the CPCB on the basis of regular surveys (CPCB 1996). In the BAU scenario, it is assumed that due to strict environmental regulations, all industrial units would have installed adequate pollution control devices. The critical issues of this industry include low efficiency of resource use, fuel quality, and lacunae in environmental governance (which is overly dependent on command-and-control type of environmental management).
- **Power industry:** Thermal generation contributes substantially to the total emission load and since bulk of the thermal power generation is coal and gas-based, projections are based on these two categories. The critical issues in this sector include process technology, fuel quality (with coal-based power generation having severe adverse impacts due to 30%–45% ash content and nuclear power generation associated with issues of radiation and disposal of radioactive wastes), and pollution control measures (with some of the older thermal power plants using such low-efficiency control devices as mechanical dust collectors and those with electrostatic precipitators having operational problems leading to overall reduction in efficiency).

### CHECK YOUR PROGRESS

3. What are the factors responsible for the degradation of land?
4. What constitutes the atmosphere?

NOTES

## 2.5 WATER RESOURCES

Water is an essential natural resource for every living being to be sustained on this Earth. Ninety-seven per cent of the Earth's surface is covered by water and 60-65 per cent is the composition of water in the body of plants and animals.

Water possesses unique characteristics which make it an incredible resource:

- It remains in the liquid form over a broad range of temperature i.e., from 0 to 100°C.
- The specific heat of water is 1 calorie / gram °C due to which its temperature increases and decreases very gradually without causing much fluctuations in temperature and hence protecting the aquatic life.
- It has high latent heat of vapourization. Hence, it takes huge amount of energy for getting vapourized and produces a cooling effect as it evaporates.
- It is an outstanding solvent for numerous nutrients. Hence, it acts as a very good carrier of nutrients, including oxygen, which are vital for life. It can also easily dissolve various pollutants and become a carrier of pathogenic micro-organisms.
- It has high surface tension and unity due to which it can easily rise through great heights, through tree trunks even in the tallest of the trees like Sequoia.
- It has a peculiar behaviour relating to expansion, i.e., as it freezes it expands instead of contracting and thus becomes lighter. It is due to this property that even in extreme cold, lakes freeze only on the surface. Being lighter, the ice keeps floating, whereas the bottom water remains at a higher temperature and therefore, can sustain aquatic organisms even in extreme cold.

The water we use keeps on cycling endlessly through the environment. This is known as the hydrological cycle. We have vast resources of water on earth equivalent to 1404 million km³. The water from various moist surfaces evaporates and again falls on the earth in the form of rain or snow and passes through living organisms and ultimately returns to the ocean. Annually approximately 1.4 inch thick layer of water evaporates from the oceans, out of which 90 per cent returns to the oceans through the hydrological cycle. Solar energy sets in motion the water cycle by evaporating it from various bodies, which afterwards return through rainfall or snow. Also, plants play a significant role by soaking the groundwater from the soil and releasing it into the atmosphere by the process of transpiration.

Distribution of water on a worldly basis is unbalanced largely due to numerous geographic factors. Maximum rainfall takes place in the tropical rain forests while the major world deserts occur in zones of dry, descending air (20-40° N and S) and receive very little rainfall.

### Water Use and Overexploitation

Water has distinct properties which makes it extremely useful for all living creatures. Water is extremely necessary for life. Most of the life processes take place in water contained in the body. Intake of nutrients, their distribution in the body, temperature regulation, and removal of wastes all takes place through water.





NOTES

Human beings use water in the following two ways:

- **Water withdrawal:** This implies extracting water from groundwater or surface water resource.
- **Water consumption:** Here, the water which is taken up is not returned for reuse.

### Water: A Valuable Natural Resource

Even though water is available in plenty on earth, yet it is very precious. About 97 per cent of the total water reserves of the world is salt water (marine), 2 per cent at present in ice caps and only 3 per cent is fresh water. Even this small amount of fresh water is not available to human beings and just 0.003 per cent is easily available to us in the form of groundwater and surface water.

Too much use of groundwater for drinking, irrigation and domestic purposes has resulted in exhaustion of groundwater in various regions leading to reduction of water table and drying of wells. Not only this, contamination of many of the groundwater aquifers has resulted in making these wells unhealthy for consumption.

Since, long time rivers and streams have been used for releasing wastes. Since time immorial, most of the civilizations have developed and flourished on the banks of rivers, however, growth in turn has been responsible for contamination of the rivers.

**Groundwater:** About 9.86 per cent of the total fresh water resources are in the form of groundwater and it is about 35-50 times that of surface water supplies.

Effects of groundwater usage:

- Subsidence
- Lowering of water table
- Waterlogging

**Surface water:** When the water formed through precipitation (rainfall, snow) does not seep into the ground or does not return to the atmosphere through evaporation or transpiration loss, it takes the form of streams, lakes, ponds, wetlands or artificial reservoirs known as surface water. The surface water is by and large used for irrigation, industrial use, public water supply and navigation. A country's economy is mainly dependent upon its rivers.

The problems arising out of water resources are floods, and droughts. Apart from these, there are disputes over water. The unavoidable nature of water and its uneven distribution has often led to conflicts between states within a country or conflicts between two or more countries. The distribution of river water between states has become a matter of concern for the governments as well as farmers. Some major water conflicts are—

- Water conflict in the Middle East: Countries involved are Sudan, Egypt, and Turkey. It also affects countries who are water starved, viz., Saudi Arabia, Kuwait, Syria, Israel and Jordan.
- The Indus Water treaty: A dispute between India and Pakistan.
- Cauvery water dispute: Involves two major southern states of India, viz. Tamil Nadu and Karnataka.
- Satluj-Yamuna Link canal dispute: Involves two northern states, viz. Punjab and Haryana. Affected states include UP, Rajasthan as well as Delhi.

NOTES

In traditional water management, innovative arrangements ensure equitable distribution of water. The 'gram sabhas' approve these plans publicly. While water disputes between states and nations often resume battle-like situations, our traditional water managers in villages prove to be quite effective.

## Big Dams: Benefits and Problems

### Benefits

River valley projects with big dams have usually been considered to play a key role in the developmental process due to their multiple uses. India has the distinction of having the largest number of river valley projects. These dams are often regarded as a symbol of national development. Such projects result in providing employment, raising the standard of living and improving the quality of life. Such projects have remarkable scope for economic growth and development. It can check floods and famines; generate electricity and reduce water and power shortages, provide irrigation water to low lying areas, provide drinking water in far-off areas and bring about overall development of the region.

### Environmental problems

Big dams pose a number of problems for the environment and hence become an issue of controversy. The problems can relate to both upstream and downstream levels.

*Upstream problems:*

- Dislodgment of tribal people
- Loss of plants, animals and aquatic life
- Changes in fisheries and the breeding grounds
- Siltation and sedimentation of reservoirs
- Loss of non-forest land
- Stagnation and waterlogging near reservoir
- Breeding of vectors and growth of infectious diseases
- Reservoir induced seismicity (RIS) causing earthquakes
- Growth of aquatic wild plants
- Microclimatic changes

*Downstream impacts*

- Waterlogging and salinity due to over-irrigation
- Microclimatic changes
- Reduced water flow and silt deposition in rivers
- Flash floods
- Salt water intrusion at river mouths
- Fertility of land near the river gets exhausted since the sediments carrying nutrients get settled in the reservoir
- Outburst of vector-borne diseases like malaria

Hence, one can understand that dams are built to fulfil certain needs of the society however; it has several shortcomings as well. Due to this reason there is now a change towards construction of small dams or mini-hydel projects.



## Water Situation in Northeast India



NOTES

Northeast India is comprised of a group of eight small states located in the northeastern corner of India. These states are Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura. Geo-ecologically it is a part of the eastern Himalayas known for its richness in water resources, biodiversity and ethnic and cultural diversity. Two large river systems of the world drains this region— mainly the Brahmaputra and the Barak (Meghna). Both these rivers are transnational which flows through the bordering countries. This region receives one of the heaviest rainfall in India. As a result the region is endowed with the highest water resources and hydropower potential in India. The prevailing approach to developing and utilizing natural resources without the participation of communities or traditional institutions in the decision making process has been a source of dissatisfaction for the indigenous communities of the region.

The hydropower potential of the region has attracted national and international attention with the result that more than 168 hydropower projects with large river dams are being planned for the region. A number of these projects are in different stages of execution by public and private sector companies. There is widespread concern over the observed and probable social and environmental impacts in the region. Protests against the negative impacts of the large dams have started a mass movement in Assam.

- Flood, river bank erosion and sand deposition are three serious water induced hazards that have significantly affected people's lives, livelihoods and agriculture and economy of states like Assam. Floods are also disasters for Tripura and Manipur.
- Quality of drinking water is another area of growing concern where conflicts are building up slowly.
- The region is also facing increasing contamination of ground water with fluoride and arsenic resulting health hazards.
- Transboundary issues like building of dams by China and alleged attempts of China to divert the Brahmaputra River within that country have given rise to serious apprehension and concerns in the region.
- Landslides, dams getting breached or diffused in Bhutan or Tibet have caused catastrophic floods in downstream areas in Arunachal and Assam.
- Unwarranted release of water to rivers from dams both in Bhutan and within the region has caused devastating flash floods in the plains.

The conflicts over water are not limited to the issues and examples cited above. These are rather indicative of many other observed or potential conflicts situations centered on water.

### Check Your Progress

5. What are the two ways in which water is used by human beings?
6. List some of the characteristics of water.

NOTES

**DID YOU KNOW**

The Ministry of Water Resources in India has launched a National Water Mission with the main objective of conserving water resources, reducing wastage, and ensuring just distribution of water across the various states in India.

**ACTIVITY**

Find out some of the rainwater harvesting methods that are being used in modern times.

## 2.6 FOREST RESOURCES

A forest is a complex ecosystem which is predominantly composed of trees, shrubs and is usually a closed canopy. Forests are storehouses of a large variety of life forms such as plants, mammals, birds, insects and reptiles etc. Also the forests have abundant microorganisms and fungi, which do the important work of decomposing dead organic matter thereby enriching the soil. Nearly 4 billion hectares of forest cover the earth's surface, roughly 30 per cent of its total land area.

The forest ecosystem has two components — the non-living (abiotic) and the living (biotic) component. Climate, soil type are part of the non-living component and the living component includes plants, animals and other life forms. Plants include the trees, shrubs, climbers, grasses and herbs in the forest. Depending on the physical, geographical, climatic and ecological factors, there are different types of forests like evergreen forest (mainly composed of evergreen tree species i.e. species having leaves throughout the year) and deciduous forest (mainly composed of deciduous trees i.e. species having leaf-fall during particular months of the year). Each forest type forms a habitat for a specific community of animals that are adapted to live in it.

The term forest implies 'natural vegetation' of the area, existing from thousands of years and supporting a variety of biodiversity, forming a complex ecosystem. Plantation is different from natural forest as these planted species are often of the same type and does not support a variety of natural biodiversity. Forests provide various natural services and products. Many forest products are used in day-to-day life. Besides these, forests play important role in maintaining the ecological balance and contributes to economy as well.

### Ecological Role of Forest

- Forests provide an environment for many species of plants and animals and thus protects and sustains the diversity of nature.
- Plants provide habitat to different types of organisms. Birds build their nests on the branches of trees, animals and birds live in the hollows, insects and other organisms live in various parts of the plant.
- Forests act as hydrologic flow modulators.





NOTES

- Plants provide a protective canopy that lessens the impact of raindrops on the soil, thereby reducing soil erosion. Roots help to hold the soil in place. They provide shade which prevents the soil from becoming too dry. This increases the moisture holding capacity of the soil.
- Forests help in maintaining microclimate of the area.
- Plants clean the air, cool it on hot days, conserve heat at night, and act as excellent sound absorbers. Transpiration from the forests affects the relative humidity and precipitation of a place. Forests clean the environment by muffling noises, buffering strong winds and preventing dust and gases.
- The layer of leaves that fall around the tree prevents runoff and allows the water to percolate into the soil. Thus, helping in groundwater recharge.
- Dead plants decompose to form humus, organic matter that holds the water and provides nutrients to the soil.
- Through the process of photosynthesis, forests renew the oxygen supply in the atmosphere by absorbing atmospheric carbon dioxide and moderating the greenhouse effect.

As per the report published by Ministry of Environment and Forests during August 2009, the annual $CO_2$ removal by India's forest and tree cover is enough to neutralize 11.25 per cent of India's total GHG emissions ($CO_2$ equivalent) at 1994 levels. This is equivalent to offsetting 100 per cent emissions from all kinds of energy in residential and transport sectors; or 40 per cent of total emissions from the agriculture sector. Clearly, India's forest and tree cover is serving as a major mode of carbon mitigation for India and the world.

- Forest cover of an area plays an important role in the amount of precipitation received by the area. Thus playing an important role in maintaining the water cycle of the area.
- Some species of trees have the ability to return nitrogen to the soil through root decomposition or fallen leaves. Such trees are planted to increase the nitrogen content of the soil.
- Forests absorb suspended particles in air which helps in reducing pollution.
- Forests also help in the process of soil formation by causing weathering of rock
- They play vital role in maintaining healthy watershed. Rivers that originate in a forest area carry the organic matter from forest to the downstream. This helps to support a variety of fishes and aquatic animals. The richness of forest in upstream decides the biological value of the river ecosystem supported by it.
- Forests provide forest food which has great medicinal value and used by local people.

In performing all these functions, forest stabilizes the climate, maintains the ecological/environmental balance of the area and shapes the landscape of the area.

### Contribution to Economy

- Forest provides valuable items like timber, paper, fuel wood, bamboo, cane, food, fibers, essential oils, etc.
- Forest plants provide hundreds of medicinal plants, spices, poisons, insecticides, soap substitutes like *ritha* and *shikakai, tendu* leaves used in *bidi* wrapping, etc.

NOTES

- Forests also provide fodder for cattle and other grazing animals. Leaves and twigs of some plants have high fodder value. It is useful fodder source during drought.
- Forests are also popular areas for relaxation and recreation and they add to the aesthetic value of the area.

## Classification of Forests

Forests can be classified in different ways. The forest type depends upon the abiotic factors such as climate and soil characteristics of a region. Forests in India can be broadly divided into coniferous forests and broadleaved forests. They can also be classified according to the nature of their tree species—evergreen, deciduous, xerophytes or thorn trees, mangroves, etc. They can also be classified according to the most abundant species of trees, such as Sal or Teak forests. In many cases, a forest is named after the first three or four most abundant tree species.

- **Coniferous forests** grow in the Himalayan mountain region, where the temperatures are low. These forests have tall trees with needle-like leaves and downward –sloping branches, so that the snow can slip off the branches.
- **Broad-leaved forests** are of several types, such as evergreen forests, deciduous forests, thorn forests, and mangrove forests. Broad-leaved trees usually have large leaves of various shapes and are found in middle to lower latitude.
- **Evergreen forests** grow in the high rainfall areas of the Western Ghats, Northeastern India and the Andaman and Nicobar Islands. These forests grow in areas where the monsoon period lasts for several months.
- **Deciduous forests** are found in regions with a moderate amount of seasonal rainfall that lasts for only a few months. Most of the forests in which Teak trees grow are of this type. The deciduous trees shed their leaves during the winter and hot summer months.
- **Thorn forests** are found in the semi-arid regions of India. The trees, which are sparsely distributed, are surrounded by open grassy areas.
- **Mangroves forests** grow along the coast especially in the river deltas. These plants are uniquely adapted to be able to grow in a mix of saline and freshwater. They grow luxuriantly in muddy areas covered with silt that the rivers have brought down. The mangrove trees have breathing roots that emerge from the mud banks.

## Threats to Forests

As the rate of development is increasing, it is putting pressure on all the natural resources around us. Forests are also getting depleted at a fast rate all over the world.

Over use and irrational use, technological and industrial growth, population growth and increasing consumption levels are major factors causing depletion of forest resources. Some other factors are mining, submergence due to big dams, shifting cultivation, use of forestlands for rehabilitation, agriculture, transport and tourism. All these activities are causing qualitative as well as quantitative depletion of forests. The forest wood is used up for construction, furniture, deriving energy (coal and firewood) and thus the increasing demand for timber, energy, paper and paper products has led to massive destruction of forests.





NOTES

When forest is cut, it is not just the trees that go but the entire ecosystem is lost which is invaluable. The full grown forests, existing since thousands of years cannot be replaced by plantations. As forests grow very slowly, people cannot use more resources than they can produce during a growing season. If timber is felled beyond a certain limit, the forest cannot regenerate.

The gaps in the forest change the habitat quality for its animal, and the more sensitive species cannot survive under these changed conditions. Over-utilizing forest resources is an unsustainable way of using our limited forest resources. As the forest resources are exploited, the forest canopy is opened up, the ecosystem is degraded, and its wildlife is seriously threatened.

**Increasing tourism activities** are also causing destruction to forest ecosystem. When the frequency of visitors and tourists becomes excessive, problems of soil erosion occur along and adjacent to footpaths. Wildlife is also disturbed, plants and saplings are trampled, and the waste is dumped at these places which disturbs the entire ecosystem.

**Forest fire** is also an important threat to forests, which destroys large areas of forest every year all over the world. It has detrimental impact on forest, wildlife and people living around. Along with the loss of biodiversity, it results in increased air pollution, migration of animals to different areas. It directly affects the livelihood of people dependant on forest resources.

**Natural disasters** like Tsunami, and earthquake destroys large forests areas in a short span of time.

All these natural as well as man-made factors cause destruction of forests on a large scale.

## Forest Management

Conservation, protection and overall management of forests are important. Entities involved in it and their role can be summarized as follows:

- Government
- Community and community organizations
- Individuals and Private Bodies

1. **Government:** Making policy and laws for conservation, protection and overall management of resources is one of the important aspects of government initiatives. India's first Forest Policy was enunciated in 1952. Between 1952 and 1988, the extent of deforestation was so great that it became essential to formulate a new policy on forests and their utilization. The earlier forest policies had focused only on revenue generation. In the 1980s it became clear that forests must be protected for their other functions such as the maintenance of soil and water regimes centered on ecological concerns. Thus, the role of India's forests in the national economy and ecology has been reemphasized in the National Forest Policy, 1988, which focuses on ensuring environmental stability, restoring the ecological balance and preserving the forests. The policy aims at increasing the forest and tree cover to 33 per cent of the country's land area. It also provided for the use of goods and services of the forest for its local inhabitants.

   Various laws like Forest Conservation Act, Wildlife Protection Act have been prepared and are being implemented by the government. The Forest Conservation Act of 1980 was enacted to control deforestation. In 1988, this act was amended

NOTES

to facilitate stricter conservation measures. Under the Wildlife Protection Act, 1972, different animals are categorized under specific schedules and there are restrictions on their hunting. As per this act specific ban is imposed on hunting of all Schedule 1 animals like tigers, leopards etc.

Another important government initiative is declaration of protected areas for conservation of wildlife. Sanctuaries and National Parks play a very important role in conservation of plants and animal gene pool. Several of these are present in catchment areas of major rivers, and so they are very important for water conservation and conservation of entire ecosystem. The government also implements many schemes for conservation of forests and for their sustainable management.

### Maharashtra Forest Policy, 2008

Maharashtra State has prepared the 'Maharashtra Forest Policy, 2008' with focus on 'Sustainable management of forests and wildlife in the State'. The policy also focuses on formulation of District wise plan for achieving 33 per cent of forest cover in the State.

### Some of the objectives of the policy

- To achieve sustainable development and conservation of forests through their scientific management, this will help in maintaining ecological balance and environmental stability.
- Afforestation on wastelands for soil and water conservation
- To increase forest cover on available government, public and private lands through participation of women and unemployed people, with the help of Social Forestry and Agricultural nurseries.
- Implementing long term plans and action plans for Conservation of wildlife and biodiversity.
- Management of Catchment areas for soil conservation
- Joint Forest Management
- Eco-tourism policy
- Reduction in use of timber and other forest produce
- Establishing Forest Development Corporation of Maharashtra (FDCM)

### Working Strategies

1. Afforestation through Social / Community Forestry
   - Afforestation will be done on wastelands and saline soils. Trees for firewood, fodder and NTFP (non-timber forest produce) will be planted. The work will be done through Social / Community Forestry with involvement of local people.
   - Land near railway tracks, state and national highways, canals will be used for plantations.
   - Green belts will be developed in urban and industrial areas to absorb carbon dioxide from the atmosphere and control the pollution. Urban forestry will be promoted on available areas in cities like gardens, open spaces, with the help of technical support from FDCM and Social Forestry.





NOTES

   - Village lands and community lands will be brought under afforestation to meet the increasing demand for timber, firewood and NTFP. This work will be undertaken with involvement of *Grampanchayat* and with technical help from Social Forestry Department.
   - Organizations and individuals will be promoted to do tree farming on their land by providing necessary facilities and bringing required changes in Land Acquisition Rules and related rules, if any.

### 2. Community and Community Organizations

Community organizations are at the interface of government and individuals. Community participation is a very important aspect in implementation of resource management programmes.

Communities take various initiatives for conservation—like Sacred Groves. These are forest patches protected for religious or cultural reasons. It is an excellent example of community conservation. Many of these groves are at the origin of rivers, thus helping in water conservation.

It also protects rare varieties of plants and animals. India has over 19,000 sacred groves. All these areas are also being disturbed due to increasing pressure on available land resource, so they need to be conserved. There are many examples of communities' role in conservation of forests e.g. the Chipko Movement and *Bishnois* in Rajasthan.

### The Chipko Movement

The 'Chipko movement' was started around 260 years back in the early 18th century in Rajasthan by the *Bishnoi* community. The name of the movement comes from the word 'embrace', as the villagers hugged the trees, and prevented the contractors from felling them. A large group of them from 84 villages led by a lady called Amrita Devi laid down their lives in an effort to protect the trees from being felled on the orders of the Maharaja of Jodhpur. After this incident, the maharaja gave a strong royal decree preventing the cutting of trees in all Bishnoi villages.

In the 20th century, this movement began in the hills where the forests are the main source of livelihood, since agricultural activities cannot be carried out easily. The Chipko Movement of 1973 was one of the most famous among these, which was initiated in the village of Mandal in the upper Alakananda valley and over the next five years spread to many districts of the Himalayas in Uttar Pradesh. It was sparked off by the government's decision to allot a plot of forest area in the Alaknanda valley to a sports goods company. This angered the villagers because their similar demand to use wood for making agricultural tools had been earlier denied. With encouragement from a local NGO, DGSS (Dasoli Gram Swarajya Sangh), the women of the area, under the leadership of an activist, Chandi Prasad Bhatt, went into the forest and formed a circle around the trees preventing the men from cutting them down. The success achieved by this protest led to similar protests in other parts of the country.

### The *Bishnois*

The *Bishnois*, a Vaishnavite sect, living in western Rajasthan on the fringe of the Thar Desert, have for centuries, been conserving the flora and fauna to the extent of sacrificing their lives to protect the environment. For these nature-loving people, protection of the environment, wildlife, and plants is a part and parcel of their sacred traditions. The basic

NOTES

philosophy of this religion is that all living things have a right to survive and share all resources.

In the fifteenth century, Swami Jambeshwar Maharaj laid down 29 tenets for his followers which included a ban on killing animals, a ban to felling of trees (especially the *Khejri* – which grows extensively in these areas). Nature protection was given foremost importance in these tenets. Since then, the sect has religiously followed these tenets. The heartland of the *Bishnois* in the forests near Jodhpur is abundant in trees and wildlife. The landscape around here is greener than elsewhere and the animals mainly antelopes, particularly the blackbuck and the chinkara, in these forests are not afraid of humans and are often seen near the villages eating out of the hands of the villagers. The Bishnois have indeed proved that human lives are a small price to pay to protect the wildlife and the forests around them.

### 3. Individuals and Private Bodies

Many individual efforts have led to conservation of tree cover in a particular area. Some people have carried out successful restoration activities on many acres of land for the revival of forest ecosystem. There are also examples of people who have done plantations of variety of tree species on their land, which has helped maintain green cover of the area.

### Major Activities in Forests

- **Timber extraction:** The activity of extracting precious timber from the forests such as Teak and Mahogany involves both a few large trees per hectare and a dozen more trees since they are strongly interlocked with each other by vines etc., and construction of roads in forest causes further destruction of forests.
- **Mining:** Extraction of minerals and fossil fuels such as coal is carried out in extensive forest areas. Minerals from shallow deposits are extracted through surface mining, while that from deep deposits is done by sub-surface mining. In India, more than 80,000 ha of land is currently subject to mining activities. Mining and its associated activities necessitate the removal of vegetation along with the primary layer of soil and overlying rock masses. As a result, the topography gets spoilt and the landscape in the area gets ruined.

  Extensive deforestation has been registered in Mussorie and Dehradun valley on account of arbitrary mining of various minerals over an area of approximately forty kilometres. The forested area has reduced at a standard rate of 33 per cent and the growth in non-forest area due to mining activities has created moderately unbalanced zones, leading to landslides.

  Since 1961 random mining in the forests of Goa has wiped out more than 50,000 ha of forest land. Coal mining in Jharia, Raniganj and Singrauli areas has resulted in large-scale deforestation in Jharkhand. Mining of magnetite and soap-stones have destroyed 14 ha of forest in hill slopes of Khirakot, Kosi valley, Almora. Mining of radioactive minerals in Kerala, Tamil Nadu and Karnataka are putting up related fears of deforestation. The luxurious forests of Western Ghats are also confronting a similar risk due to mining proposals for excavation of copper, chromite, bauxite and magnetite.
- **Mining Engineerng:** Mining Engineering is a field that involves other engineering disciplines as applied to extracting and processing minerals from a naturally occurring environment.





NOTES

A technologically advanced society certainly deals in mineral extraction and production. As minerals are produced from within the natural environment, they are bound to disturb the environment. Hence, modern mining engineers must ensure that minimal damage or modifications are made to the environment as a result of mineral processing and production.

The two main kinds of mine are underground mines and open-pit mines. Minerals that exist moderately deep underground (e.g., some coal seams, gold and some metalliferous ores) are usually recovered using underground mining methods. Minerals like iron ore, shallow coal seams and bauxite are generally recovered from the surface by open pit mining.

### Dams and their Effects on Forests and People

Big dams and rivers valley projects have multi-purpose uses and Pandit Jawaharlal Nehru used to refer to these dams and valley projects as 'Temples of modern India'. However, these dams are also accountable for the devastation of vast areas of forests. More than 1550 large dams have been constructed in India, the maximum being in the state of Maharashtra (more than 600), followed by Gujarat (more than 250) and Madhya Pradesh (130). The highest one is Tehri Dam, on river Bhagirathi in Uttarakhand and the largest in terms of capacity is the Bhakra Dam on river Satluj in Himachal Pradesh.

Numerous environmental groups across the globe have been focusing on the construction of large dams as their construction requires the cutting down of tress which further creates several socio-economic problems for the natives of the hilly regions.

For instance, the Silent Valley Hydro-Electric Project situated in the tropical rain forest area of Western Ghats, was one of the earliest projects which drew attention of the people.

The leader of Chipko Movement, Shri Sunderlal Bahaguna, vehemently led the campaign against the ecological damage and deforestation caused due to Tehri Dam. Similarly, several environmental issues related to Sardar Sarovar Dam were campaigned by the environmental activitist Medha Patkar, joined by Arundhati Roy and Baba Amte.

The construction of large-scale dams requires cutting down of trees and leads to devastation of precious species which could be possessing medicinal properties and hence could be used in saving lives. Not only this, the ecological balance of the region gets broken which further leads to natural disasters such as floods, droughts and landslides.

#### Check Your Progress

7. What are forests basically used for?
8. List the major causes of deforestation.

## 2.7 MINERAL RESOURCES

Minerals are natural, inorganic, crystalline solids having distinct chemical composition and typical physical properties. Thousands of minerals are found in different parts of the world. However, most of the rocks that we see daily are just composed of a few common minerals like quartz, feldspar and biotite. These minerals, in turn, are composed of elements like silicon, oxygen and iron.

NOTES

Minerals are generally used for development of industrial plants, generation of energy, construction, equipment and armament for defence, transportation, medical system, communication, jewellery- gold, silver, etc.

Environmental impacts of mineral extraction are devegetation and defacing of landscape, subsidence of land, groundwater contamination, surface water pollution, air pollution, occupational health hazards, etc.

Remedial measures include adoption of eco-friendly technology, microbial leaching technique, re-establishment of mined areas by re-vegetating them with suitable plant species, stabilization of the mined lands and growing plants in the area again.

**Case Example: Tracing Health and Happiness in the Mining Belt of Goa**

New tools promote the sustainable development of mining

Goa, the Indian state is famous for its beaches and is world renowned as the ideal destination for travellers. Very few are aware of the fact that Goa is a major contributor of India's iron ore industry. The mining belt located in the middle of this state is responsible for 60 per cent of the nation's iron ore exports. There is a sharp dissimilarity between the picturesque beaches of Goa and the mining belt located in the interior of the state. The practice of open cut mining has led to several ramifications in the state which include flattened hills, clearance of forests, and fields covered with run-off silt from waste locations and processing plants. Apart from the disheveled landscape, one will realize that the mining operations in Goa have brought about several positive changes such as the creation of jobs, improvement in the health and education standards, and enhancement of material aspects of the local people.

The story of mining operations in Goa is akin to the several mineral-rich regions of the world where economic considerations have gained prominence over environmental issues.

## The search for balance

According to Dr Ligia Noronha of the Western Regional Centre of the Tata Energy Research Institute (TERI), 'Closing the mines because of their environmental impact is not an option for Goa... But there is a need to bring about some balance between the economic gains and the environmental losses to ensure greater sustainability for the region and local communities....' Building local trust 'Early on, we understood that we needed a broad perspective for understanding well-being and its determinants, as well as a means of addressing the various realities of the people living and working in mining areas,' says Dr Noronha. 'We chose an ecosystem approach because it places an equal emphasis on concerns related to the environment, the economy, and the community in assessing the significance of an economic activity to human well-being. For us, it seemed the best way to go....'

The general set of primary issues to surface from this progression were:

- **Land:** its availability for mining operations and issues of reimbursement to farmers.
- **Environmental quality:** anxiety about the degradation of air, water, land and forests.
- **Post mine-closure:** concerns relating to unemployment, possibility of income, rate of migration, alcoholism, and environmental clear out.
- **Human and physical investment in the region:** education, basic amenities, rent-sharing with locals, training opportunities, and health care facilities.





NOTES

- **Social and community relations:** nongovernmental organizations' interference, political interference, media under-reporting of problems, cosmetic attention to problems, and consultation.
- **Effective administration:** implementation of rules, accomplishment of goals and responsibility.

Keeping the above set of issues in mind, the TERI researchers devised three methods for determining the impact of mining activities and their effect on the general health and happiness of the people:

(i) A set of environmental and social performance signs to calculate the economic, environmental, and social costs of mining; (ii) A 'quality of life' device to evaluate the health and happiness of people in mining areas over a time frame; and (iii) A tool for calculating the income derived from the mining activity as a sustainable means of livelihood.

## Evaluating change

The TERI team developed a number of signs and tools for determining the contribution of various stakeholders in enhancing the performance of environmental and social factors. For instance, for mining companies, an indicator of environmental performance is whether wastewater was treated and tailings water was recycled or not. Another indicator of environmental quality could be gauged from the water levels in wells and rivers of the villages. Since the government agencies monitored the assessment and evaluation, they also served as indicators of good environmental governance.

## Monitoring quality of life

In developing the quality of life (QOL) instrument, the TERI team collaborated with focus groups of 10 to 12 people who represented different groups of the community and included members of the three stakeholder groups.

... In Goa, the QOL instrument will provide stakeholders with a rough estimate of how the mining activity played a vital role in changing the quality of life over time depending on whether mining is new to the area, well established, or in the process of closing down. According to Dr Noronha, this comprehensive view of changes over time can 'suggest policies and promote improved industry and government practices that will lead to improved health and well-being of people.'

## Promoting sustainable development

The role of mining activity in the sustainable development of the community has been a much debated topic among the policy and decision makers. The TERI researchers with the development of income calculation tool have made attempts to show how the mining activity which has a limited life, can be combined with social and environmental issues in a way that enhances the development of the community in times to come.

The method adopted by the TERI team also takes into account the ill-effects of mining, which include air and water pollution, deforestation of forests, groundwater depletion and reduced agricultural productivity. The method also considers the direct and indirect advantages to the society. For instance, in the case of forests, the method considers the production of marketable products which generates revenue for the local people and the indirect benefits from watershed protection and other services. Moreover, in return for the economic benefits derived from the mining activity, the mining company should finance environmental rehabilitation.

NOTES

The TERI team used alike evaluation practices to place values on the health and social costs of mining. Some sort of financial assistance would also be made available to the community after closure of the mining activity in the region. This would assist in compensating the main problems linked with the closure of mines, the lack of skills and resources required for an alternate means of livelihood.

### A step forward

However, it should be mentioned that the methods and instruments devised by the TERI team do not provide a complete solution. For instance, they do not focus on the distorted power relationship which is generally found in the mining areas. 'In Goa, mining is big business and mine owners are politically powerful,' says Dr Noronha. 'Mining is causing serious environmental problems, but few questions are asked.'

Dr Noronha views the development of these methods and indicators as a stride ahead in rectifying this unevenness. 'Mining companies are now aware and, more importantly, acknowledge that they have to act responsibly, that their activities are being monitored and assessed,' opines Dr Noronha. 'Communities have information, both positive and negative, about the activity and its impact in relation to certain societal goals or standards, if they want to act toward improved conditions for themselves. And government officials know there is access to information if they want to use it to improve governance in mining regions.'

According to Dr Noronha, this can enhance responsibility and transparency in resource development.

***Source:*** Adapted from the Case Study written by Kevin Conway, a writer in Canada's International Development Research Centre's (IDRC) Communications Division.

## 2.8 FOOD RESOURCES

There are innumerable edible plants and animals all over the world, yet only about three dozen types comprise the main food of humans. The main food resources include wheat, rice, maize, potato, barley and oats and about twenty or so common fruits and vegetables, milk, meat, fish and seafood.

### World Food Problems

Annually the number of people killed due to food problems is equivalent to the number of people that were killed by the atomic bomb dropped on Hiroshima during World War II. This shows that there is a drastic necessity to boost food production, even distribution and also to monitor and regulate population growth. Even though India is the third largest producer of staple crops, approximately 300 million Indians are still malnourished. This is because India's population is growing at a rapid pace and its food production is not sufficient enough to feed every individual.

Because of overgrazing, the agricultural land gets affected in the following way:

- Land degradation
- Soil erosion
- Loss of useful species

Agriculture also makes an impact on the usage of land as follows:

- Deforestation
- Soil erosion
- Depletion of nutrients





NOTES

The impact of modern agriculture is as follows:

- Impact related to high yielding varieties (HYV).
- Fertilizers related problems include micronutrient imbalance, nitrite pollution and eutrophication
- Pesticide-related problems include creating resistance in pests and producing new pests, death of non-target organisms, biological magnification
- Some other problems include waterlogging and salinity problems

**Case Example: Statement by the Advisory Group on Nutrition on the World Food Problem Hunger and Malnutrition**

The World Food Conference of 1974 and the two decades which followed the conference subsequently, have long debated the issue of food production in the world and its method of distribution. Moreover, the question of supply of food to people has long been overlooked. The focus has mostly been on access to food and its distribution. However, we tend to assume that the focus was correct. It concentrated focus on the right to food, individual and food security, and issues concerning the standard of food made available for consumption of human beings. These issues have been generally highlighted in international forums such as the International Conference on Nutrition held in 1992. International policy obligations have made attempts to bring about a reasonable increase in the flow of resources related to the area of nutrition and other associated areas, which would further help not just in famines but also help secure food and nutrition goals in the coming future.

Of late, the focus has now shifted to the problem of food supply rather than on the production of food and its distribution. Factors such as increasing population, rising urbanization, dilemmas about the practice of intensive farming and the irrigation systems, and a gradual decline in the production of essential food staples have led several observers to lay emphasis on agricultural research and outlays intended to boost agricultural productivity and production. These concerns or issues are going to be reinforced with the structural changes taking place in the world economy, which would comprise changes in Eastern Europe and the former Soviet Union and the outcome of the GATT agreement on world food trade.

Agricultural research and investment will go a long way in alleviating hunger if they are planned in accordance with the changing geographical and socio-economic scenario of the world and also while considering the perception of poor people towards their malnutrition related problems. In the present times, this implies an increased emphasis on the capacity of producing food by poor people, encouragement of safe and sustainable methods of income in Africa, to the requirements of households headed by females and semi-urban population, and to steps that will reduce the dreadful effects of drought and issues of food supply, prices of food and the accessibility to food by poor people. The outlays and investments in the field of agricultural production need to be constantly re-evaluated to ensure sustainable and adequate food supply all across the world.

We believe that increased investments in these areas are entirely in concert with the massive programmes of action required to achieve the goals set by the International Conference on Nutrition. At the same time, and in a world where aid resources are increasingly scarce, the additional resources required to address issues related to world food supply should not be sought at the expense of those needed to strengthen the effective demand of the deprived of food, health and household care. In our analysis of

NOTES

the world food problem, household access to food remains one of the most urgent food problems for the foreseeable future.

*Source: Report on the Twenty-First Session of the Sub-Committee on Nutrition,* UNICEF, New York, 7–11 March 1994.

## 2.9 ENERGY RESOURCES

Energy consumption of a nation is usually considered as a manifestation of its development. This is due to the reason that the element of energy is an essential component for all developmental activities. Per capital energy consumption varies in both developing and developed countries.

One of the earliest based technology that was invented was fire, which produced heat and the early man used it for cooking and heating purposes. Wind and hydropower has also been used. Invention of steam engines replaced the burning of wood by coal and coal was further replaced by oil.

Energy resources are primarily divided into two categories, viz. renewable and non-renewable sources.

Renewable energy resources must be preferred over the non-renewable resources. This will seek to end the energy crisis which the world is facing today. It is inevitable truth that now there is an urgent need of thinking in terms of alternative sources of energy, which are also termed as non-conventional energy sources. These include: (1) solar energy, (2) wind energy (3) hydropower, tidal energy, ocean thermal energy, geothermal energy, biomass, biogas and biofuels. The non-renewable energy sources include coal, petroleum, natural gas and nuclear energy.

Wind energy is used after the kinetic energy present in it is converted into mechanical or electrical energy. The energy derived from the wind is sustainable and non-polluting. This type of energy does not require any fuel, does not produce toxic or radioactive wastes. Like other forms of energy, the wind energy does not produce greenhouse gases and neither does it create harmful effects for birds or wildlife of the adjoining areas.

Windmills date back to as far as the 9th century in Persia, when these were used to grind grains or draw water. Typically, the wind energy was converted in order to crush, press and grind grains to pulps. The windmills, during this period, had six to twelve sails, covered with reeds or cloths. These were different from the European-style horizontal windmills of the next century. In the 12th century in Europe, windmills were mostly perched on top of castles and city wall towers.

The modern use of the wind energy is generation of electricity, pumping water, etc. Presently, wind energy machines are called wind turbine generators, wind pumps, or more generally, wind turbines. The use of wind energy, worldwide, started during the early 1990s. In 1999, over US $3.5 billion was invested in this sector, especially in farms that use wind energy. Most of this amount was spent in Europe in order to lessen greenhouse gas pollution. By the end of April 1999, some 22.5 TWh of electricity was produced that was enough for meeting the domestic and industrial requirements of a population of about eight million people.

Late 1970s and early 1980s saw a great surge of wind power industry due to the oil embargo of the OPEC countries. The wind industry is one of the fastest growing industries with an average annual growth rate of 31 per cent of the world installed capacity of wind power. The tremendous environmental, social and economical benefits of the wind industry make way for its unprecedented benefits. The industry is also growing at this pace due to its technical maturity, public support and government incentives.





NOTES

## 2.10 ROLE OF INDIVIDUALS IN THE CONSERVATION OF NATURAL RESOURCES

Different natural resources like forests, water, soil, food, mineral and energy resources play a vital role in the development of a nation. With our small individual efforts we can help in conserving our natural resources to a large extent. The following are some of the ways:

### Conserve Water

- Do not keep water taps running while brushing, shaving, washing or bathing.
- In washing machines, fill the machine only to the level required for your clothes.
- Install water-saving toilets that use not more than six litres per flush.
- Check for water leaks in pipes and toilets and repair them promptly.
- Reuse the soapy water of washing from clothes for gardening, driveways, etc.
- Water the plants and the lawns in the evening when evaporation losses are minimum. Never water the plants in mid-day.
- Install a system to capture rain water.

### Conserve Energy

- Turn off lights, fans and other appliances, when not in use.
- Obtain as much heat as possible from natural sources. Dry the clothes in sun instead of using dryers.
- Use solar cooker for cooking which will make the food more nutritious and will save your LPG expenses.
- Build your house with provision for sunspace which will keep your house warmer and will provide more light.
- Drive less, make fewer trips and use public transportations whenever possible. Share a car-pool if possible.
- Control the use of air conditioners.
- Recycle and reuse glass, metals and paper.
- Use bicycle or just walk down small distances instead of using an automobile.

### Protect the Soil

- Grow different types of ornamental plants, herbs and trees in your garden. Grow grass in the open areas which will bind the soil and prevent its erosion.
- Make compost from your kitchen waste and use it for your kitchen-garden.
- Do not irrigate the plants using a strong flow of water as it would wash off the soil.
- Use sprinkling irrigation.

NOTES

**Promote Sustainable Agriculture**

- Do not waste food; take only as much as you can eat
- Reduce the use of pesticides
- Fertilize your crops with organic fertilizers
- Use drip irrigation.
- Eat local and seasonal vegetables
- Control pests

### Check Your Progress

9. What are minerals generally used for?
10. What is the impact of agriculture on the usage of land?

## 2.11 CULTURAL RESOURCES

India is a country which is extremely rich in cultural resources. Despite diversity of cultures, religions, traditions, customs, languages, dressing, thoughts, ideas and the living styles, there is harmony in Indian culture. The Hindus are in majority but other religions like Sikhism, Islam, Buddhism, and Christianity are also found in our country and are equally respected.

India has witnessed many reformers, revolutionaries in different periods. Indian culture has been enhanced from their presence and ideologies. This has made a significant impact on the development of Indian culture and it has helped in setting up an example all over the world.

Since several years, Indian culture has emphasized on the joint family system, unity among various castes and religions. The Indian culture has also kept at par all the ideals, faith and beliefs, principles of all the religions that exists in our country.

Cultural heritage of India is characterized by the cultural diversity of our country. As India has a diversified culture consisting of different religions different festivals are celebrated in various parts of India with their traditional fervour and gaiety. Hence, the Indian culture is symbolic of 'Unity in diversity' culture. For example, Ganpati Poojan of Maharashtra, Durga Pooja of Bengal, and Dandiya Raas in Navratras in Gujarat are the different festivals that are celebrated vibrantly and exhibit their exquisite traditions of folk dances and music.

Cultural diversity has been defined by UNESCO as; 'it is the common heritage of humanity and should be recognized and affirmed for the benefits of the present and future generation.' The beliefs, values, visions, practices, expressions, innovations, creativity differ depending on the caste, religion, place, language, customs, traditions and thoughts.

### 2.11.1 Obstacles of Cultural Harmony

Some of the obstacles that one comes across while maintaining cultural harmony are given below:





NOTES

**Globalization:** Globalization is causing fear of differences in views, therefore, breaking the uniformity of culture.

**Marginalization:** Marginalization, also known as social exclusion means the formation of social groups by individuals who are reluctant to change their ideologies and principles. They are normally, reluctant to accept any modification happening in the society. This becomes a major hurdle in the way of cultural diversity.

**Age-old traditions:** Traditions which are continuing from a very long period lose their core meaning with the passage of time. These prolonged traditions create a gap between the elderly group of people and the youth. This gap between the thought processes of two generations blocks the development of cultural harmony.

**Westernization and Modernization:** The influence of western culture on Indian society has ruined the identity of Indian culture. On the other hand, modernization refers to the change in one's lifestyle, thought process and overall change in an individual due to an external influence.

These two factors are the major obstacles in the development of cultural harmony in India.

**Extinction of Cultural Resources:** Cultural resources comprise literature, folk dance forms, music, architecture and festivals. These cultural resources are being replaced by modern dance forms. Nowadays, festivals are rarely celebrated and folk music is losing its identity. In a nutshell, our cultural resources are extinguishing leading to the non development of cultural harmony.

**Economical and social differences:** Inequality of income and socio-economic status has created a gap among the people of our country. People form societies\groups according to their status. People belonging to the upper class have a different lifestyle as compared to the people belonging to the middle class or low class. Thus, this indifference causes a hurdle in cultural harmony.

### 2.11.2 Specimens of Art/Architecture

India is rich in cultural resources and has a wide range of monuments, buildings, diversified languages, dance forms, sculptures, religions, etc. Some of them are mentioned below:

**1. Monuments:**

The Ancient Monuments and Archaeological Sites and Remains Act, 1958 defines an 'Ancient Monument' as follows:

'Ancient Monument means any structure, erection or monument, or any tumulus or place of interment, or any cave, rock-sculpture, inscription or monolith which is of historical, archaeological or artistic interest and which has been in existence for not less than 100 years and includes—

- Remains of an ancient monument
- Site of an ancient monument

Such portion of land adjoining the site of an ancient monument as may be required for fencing or covering in or otherwise preserving such a monument,

The means of access to, and convenient inspection of, an ancient monument;'

NOTES

## 2. Archaeological sites and remains

The Section 2(d) defines archaeological site and remains as follows:

'Archaeological site and remains means any area which contains or is reasonably believed to contain ruins or relics of historical or archaeological importance which have been in existence for not less than one hundred years, and includes such portion of land adjoining the area as may be required for fencing or covering in or otherwise preserving it, and the means of access to, and convenient inspection of the area;'□

The World Heritage has recognized twenty-two cultural and five natural sites in India.

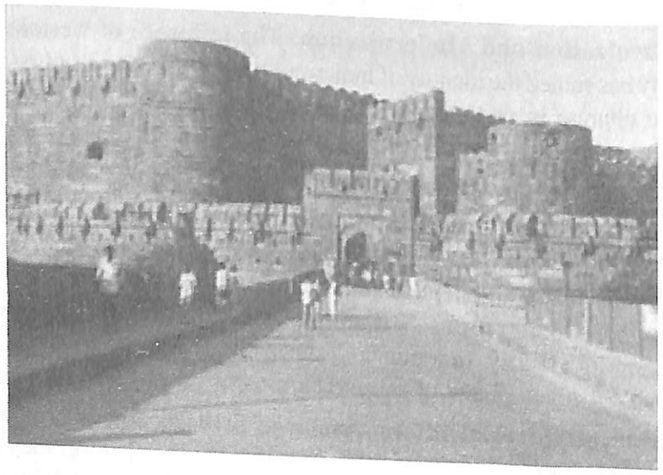


***Fig. 2.1*** *Agra Fort, Agra*

Agra Fort was built by Akbar in AD 1565-1575. Apart from other important units, it comprises Jahangiri Mahal, Khass Mahal, Diwan-i-Khass, Diwan-i-Am, Machchhi Bhawan and Moti Masjid. Several existing buildings were erected by Shah Jahan (AD 1630-1655).



***Fig. 2.2*** *Ajanta Caves*





NOTES

The world famous Ajanta Caves including the unfinished ones are thirty in number. These caves were discovered in AD 1819.



***Fig. 2.3*** *Ellora Caves*

The magnificent group of rock-cut shrines of Ellora, represent three different faiths, Buddhist, Brahmanical and Jaina which were excavated during the period from fifth to the thirteenth century AD.

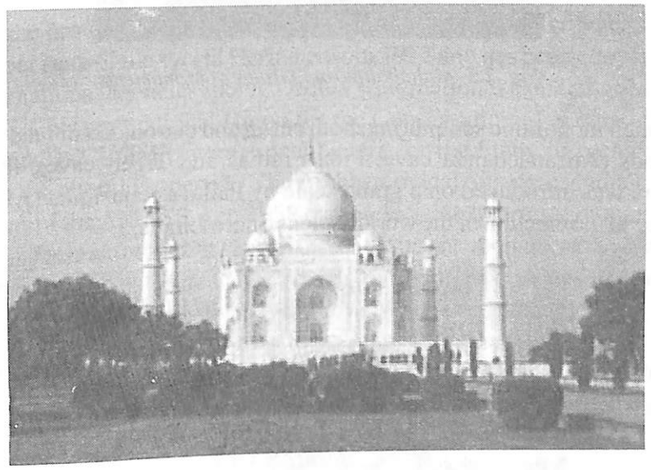


***Fig 2.4*** *Taj Mahal, Agra*

Taj on the bank of river Yamuna, about 1.5km from the Agra fort, was built to enshrine the remains of Arjumand Banu Begam entitled Mumtaj Mahal, the queen of the Mughal emperor Shah Jahan. Its construction commenced in AD 1631 and took seventeen years to complete.

NOTES

Mahabalipuram Group of Monuments (1984). Mahabalipuram or Mamallapuram, the city of Mamalla, is named after the title of great Pallava ruler Narasimhavarman-I (AD 630-668).



*Fig. 2.5 Mahabalipuram Group of Monuments*

Though monolithic sculpturing, both cut-in and cut-out, continued even during later periods (Atiranachanda cave, Pidari rathas and Tiger- cave), the structural architecture was introduced on a grand scale by Pallava Rajasimha (AD 700- 728) culminating in the erection of the world famous Shore temple.

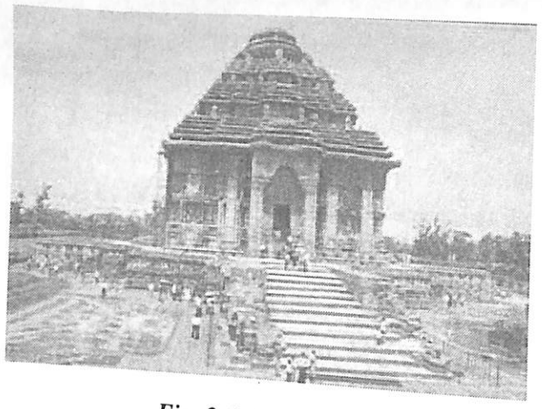


*Fig. 2.6 Sun Temple, Konark*

Konark is the Kainapara of the Periplus (first century AD)—an important port of the Orissan coast. Sun Temple was built in AD 1250, during the reign of the Eastern Ganga King Narasimhadeva-I (AD 1238-1264), to enshrine an image of Sun (Arka), the patron deity of the palace. The entire complex was designed in the form of a huge chariot drawn by seven spirited horses on twelve pairs of exquisitely carved wheels.





NOTES



*Fig 2.7 Group of Monuments at Hampi*

Hampi is situated on the southern bank of the Tungabhadra. Monuments were built here between AD 1336 and 1570, from the time of Harihara I to that of Sadasiva Raya. Royal buildings were raised by Krishnadeva Raya (AD 1509-1530). Hampi covers an area of nearly 26 sq km and is enclosed by seven lines of fortifications. The largest extant temple is that of Pampapati with a magnificent entrance tower created by Krishnadeva Raya.

### 2.11.3 Protection of Monuments

In 1972, the General Conference of UNESCO adopted a resolution named 'Convention concerning the protection of the World Cultural and Natural Heritage.' India is an active member state of the World Heritage from 1977 and has been cooperating with various International agencies like ICOMOS (International Council of Monuments and Sites), IUCN (International Union for the Conservation of Nature and Natural Resources) and ICCROM (International Centre for the Study of preservation and Restoration of Cultural Property). The Archaeological Survey of India (ASI) under the provisions of the AMASR Act, 1958 makes decision to bring a monument under its protection. There are at present more than 3,650 ancient monuments and archaeological sites and remains of national importance ranging from temples, mosques, tombs, churches, cemeteries, forts, palaces, step-wells, rock-cut caves. The main objectives of ASI are: (i) To look after the ancient monuments and preserve them. (ii) To carry out research and conservation activities. (iii) The Science branch of ASI carries out the job of chemical preservation. (iv) The horticulture branch of ASI develops and maintains the garden sites that come under the purview of ASI.

### Museums

The Indian Museum in Kolkata and the Salar Jung Museum in Hyderabad come under the legislation of the Central Government.

The Indian Museum Act, 1910 established a body by the name of 'The Trustees of the Indian Museum' for the purpose of maintaining and preserving the Indian Museums. The responsibilities of the trust are listed below:

- The trustees have the power to lend, exchange, sell or destroy the articles in the museum's collection.
- They can make bye-laws for the execution of the trust.
- They can appoint officers and servants for the care and management of the trust property.

NOTES

The Salar Jung Museum Act, 1961 established the Salar Jung Museum Board for the maintenance and administration of the museum. The duties of the Board are:

- To manage the museum efficiently.
- To organize, promote and implement programmes for the development of the museum.
- To give instructions, do research; disseminate information in matters related to the museum and the library.
- The Board is also free to purchase and acquire articles for preservation in the museum and replace the articles of the museum.

## 2.11.4 Indian Architecture

The Indian civilization is undoubtedly a gifted architecture which has evolved through the centuries. Specimens of Indian architecture were first witnessed in the Indus Valley Civilization and later on in the Buddhist monasteries in India.

Some of the magnificent architectural works existing in Indian history are: Great Stupa at Sanchi, the rock-cut caves of Ajanta and Ellora, temples of Mahabalipuram, temples at Thanjavur and Belur in South India, Nagara style architecture of North India and Khajuraho in Central India.

Architectural styles of different time periods are:

### 1. Temple Architecture

Ancient India exhibited the development of temple architecture. The rulers of different periods in different parts of India constructed temples which exhibit a unique architectural style and due to which there is a significant diversity in the temple architectural style of temples. Also, this architecture depicts geographical, climatic, ethnic, racial, historical and linguistic diversities.

### 2. Rock Cut Architecture

The Rock-cut structures present the most spectacular architectural patterns. These rock-cut structures are related to various religious communities. Reflection of Buddhism and Jainism can be witnessed in this rock cut architectural style.

### 3. Cave Architecture

The cave architecture in India began in the third century BC by Buddhist and Jain monks as places of worship and residence.

### 4. Ancient Architecture

Indian architecture is the oldest in the history of the civilization. Among India's ancient architecture remains the most characteristic are temples, chaityas, viharas, stupas and other religious structures.

### 5. Indo Islamic Architecture

The Indo Islamic architecture developed in the medieval period. It came into existence with the emergence of Mughals and Muslim conquerors in India. The Indo-Islamic style was neither stringently Islamic nor Hindu.

### 6. Colonial Architecture

Colonial architecture has also significantly contributed to the history of architecture in India. The colonies of Dutch, Portuguese and the French made their presence felt through their monuments\buildings.





NOTES

## 2.11.5 Protection and Promotion of Cultural Resources

Following are the ways in which one can protect and promote cultural resources.

- Protect and promote the art, craft and cultural heritage by recognizing the traditional and contemporary art forms and maintaining their identity.
- Plan, organize and implement various programmes to protect, promote, conserve and preserve the art work, paintings, sculptures, and handicrafts.
- Coordinate with the artists, small craftsmen, associations, NGOs and governmental organizations at the local, district, state, national and international level.
- Search, identify, collect, store, preserve, and conserve the art and craft products, items and materials.

  Also the activities of documenting, distributing, exhibiting, exchanging, selling, purchasing, processing, packaging and marketing of such items.
- Organize study courses, workshops, conferences and lectures on the conservation of natural and cultural property and resources.
- Provide information services and setting up of libraries.
- Develop awareness among the public for the preservation of the art, cultural and natural resources and heritage of India.
- Strengthen and extend cooperation with the professional, regional, national, international organizations, government and semi government bodies.
- Plan projects related to art, craft, manuscripts and paintings, statues, museums, etc.
- Conduct and organize seminars, trainings, workshops relating to conservation and maintenance of the Indian heritage.
- Organize lectures and performances including skits, street plays, etc., to spread awareness about the cultural monuments among different sections of the society.
- Encourage professionals to undertake and stimulate research on problems of conservation in an Indian environment and to find out the alternatives.
- Organize exhibitions related to the preservation of cultural heritage.
- Provide guidance and counselling services to corporate and private collectors on the storage and preservation of art and craft and architecture material.
- Plan, set up, develop and maintain art galleries, craft centres, museums to promote artistic, aesthetic and technical knowledge.
- Develop a sense of social responsibility towards preserving art and architecture.
- Protect and conserve the natural and manmade, monuments, buildings by taking the necessary actions and measures.
- Get the necessary documentation of the unprotected buildings of archaeological, architectural and historical significance.
- Formulate heritage policy and regulations, and make legal compliances to protect our heritage, when necessary.
- Undertake emergency response measures during natural or manmade disasters, and to support local administration wherever heritage is threatened.
- Foster collaborations, MOUs and partnerships with government and other national and international agencies.

NOTES

- Generate sponsorships for conservation and educational projects.
- Facilitate and assist conservationists in the restoration of works of art and other monuments and buildings.
- Promote cultural tourism, facilitate heritage festivals, organize craft melas, etc.
- Spread awareness through the setting up of heritage clubs and heritage societies in educational institutions.
- Make provisions for awards, fellowships, grants, scholarships and prizes in cash or kind to artists, artisans, craftsman, art galleries engaged in the promotion of art, culture and literature.
- Develop and design educational material on art, culture and creating awareness regarding the cultural sites and monuments through worksheets, handy guides, books, manuals heritage maps, CDs and websites.
- Make legal interventions through the Public Interest Litigations when to conserve and protect the art and heritage of the country.
- Promote, establish, support, maintain or grant aids to institutions for the promotion of science and technology, literature, music, drama and fine arts.
- Promote handicrafts, cottage industries and self-employment activities and providing assistance to the traditional artists and to work towards the improvement of the lives of the artists.

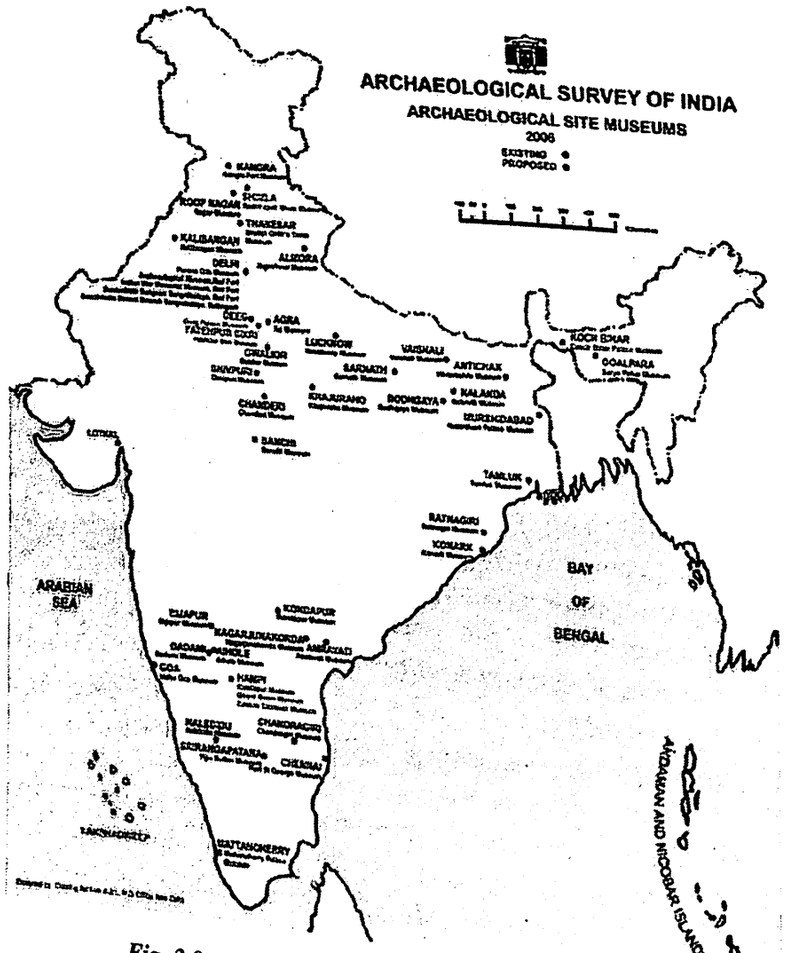



*Fig. 2.8 Map Showing Archaeological Sites of India*





NOTES

## Check Your Progress

11. List some of the hurdles in the path of cultural harmony.
12. Name some of the specimens of art/architecture that exist in Indian history.
13. State some of the architectural styles that existed during the different time periods in India.

## 2.12 SUMMARY

In this unit, you have learnt that:

- According to Ramade (1984), a natural resource is defined as a form of energy and/or matter which is essential for the functioning of organisms, populations and ecosystems.
- Resource is a means, which may or may not be material. It has specific functions and can be utilized to meet the needs of individual and society as a whole, in a given space and time.
- There are many materials in the world that can neither be termed as resources nor resistances. These materials are known as 'neutral stuff'.
- There are different classifications of natural resources. According to Odum (1971), natural resources can be divided into two categories, renewable and non-renewable resources. They can also have two further categories of Biotic/Abiotic and Inexhaustible Resources.
- Resources that can be replenished through rapid natural cycles are known as renewable resources. These resources are able to increase their abundance through reproduction and utilization of simple substances.
- The renewable resources are of two types:
- *Conventional type*, such as water resources, plants and forests, wildlife, livestock, aqua culture, etc.
- *Non-conventional type*, such as solar energy, wind energy, biogas, atomic energy, etc.
- Forests constitute 90 per cent of the global biomass. They are important as they regulate climatic conditions, such as rainfall, humidity, temperature and protect soil from erosion.
- Although fossil fuels are non-renewable, they still form very slowly as compared to their consumption. Biomass although non-renewable can be made renewable by fuel-wood plantations.
- Radioactive elements are utilized to harness energy in the atomic reactors. The nuclear reactors produce an enormous amount of heat that is used to produce steam, which in turn is used to run turbines to generate electricity.
- Minerals are natural substances (organic and inorganic) that occur as ores in the earth's crust. Minerals like iron (Fe), copper (Cu), zinc (Zn), manganese (Mn) and aluminium (Al) are used as building materials for manufacturing

NOTES

automobiles, ships, rail tracks, etc., as nutrients for plants and as components of glass and ceramics.

- Non-renewable resources can further be divided into two categories, viz. (a) recyclable and (b) non-recyclable.
- We should protect and conserve our natural resources and use them in a prudent manner so that the resources are not exhausted. Natural resources should be used in such a manner so that even the coming ages are able to utilize them.
- Due to the increase in population, the demand for arable land for producing food and fuel wood is also increasing.
- Various anthropogenic activities like hydroelectric projects, large dams, reservoirs, construction of roads and railway lines, construction of buildings and mining are responsible for clearing of large forested areas.
- Water is an essential natural resource for every living being to be sustained on this earth. 97 per cent of the earth's surface is covered by water and 60-65 per cent is the composition of water in the body of plants and animals.
- The water we use keeps on cycling endlessly through the environment. This is known as the hydrological cycle. We have vast resources of water on earth equivalent to 1404 million $km^3$.
- About 97 per cent of the total water reserves of the world is salt water (marine), 2 per cent in present in ice caps and only 3 per cent is fresh water. Even this small amount of fresh water is not available to human beings and just 0.003 per cent is easily available to us in the form of groundwater and surface water.
- The problems arising out of water resources are floods, droughts. Apart from these, there are disputes over water.
- River valley projects with big dams have usually been considered to play a key role in the developmental process due to their multiple uses. India has the distinction of having the largest number of river valley projects.
- Forest Resource is the dense growth of trees, together with other plants, covering a large area of land. Forests are one of the most natural resources found on earth. Covering earth like a green blanket, these forests not only produce innumerable material goods, but also provide several environmental services which are essential for life.
- Since a long time, human beings have been largely dependent on forests for food, medicine, shelter, wood and fuel. With the rapid growth of population the demands for raw materials such as timber, pulp, minerals and fuel wood increased drastically resulting in extensive logging, mining, road-building and clearing of forests.
- Minerals are natural, inorganic, crystalline solids having distinct chemical composition and typical physical properties. Thousands of minerals are found in different parts of the world.
- There are innumerable edible plants and animals all over the world, yet only about three dozen types comprise the main food of humans. The main food resources include wheat, rice, maize, potato, barley and oats and about twenty or so common fruits and vegetables, milk, meat, fish and seafood.





NOTES

- Energy consumption of a nation is usually considered as a manifestation of its development. This is due to the reason that the element of energy is an essential component for all developmental activities. Per capital energy consumption varies in both developing and developed countries.
- Energy resources are primarily divided into two categories, viz. renewable and non-renewable sources.
- Renewable energy resources must be preferred over the non-renewable resources.
- Different natural resources like forests, water, soil, food, mineral and energy resources play a vital role in the development of a nation. With our small individual efforts we can help in conserving our natural resources to a large extent.
- There is a big division in the world in the use of resources, viz. north and south, more developed countries (MDCs) and less developed countries (LDCs), haves and have-nots.
- India is a country which is extremely rich in cultural resources. Despite diversity of cultures, religions, traditions, customs, languages, dressing, thoughts, ideas and the living styles, there is harmony in Indian culture. The Hindus are in majority but other religions like Sikhism, Islam, Buddhism, and Christianity are also found in our country and are equally respected.
- Cultural diversity has been defined by UNESCO as; 'it is the common heritage of humanity and should be recognized and affirmed for the benefits of the present and future generation.'
- India is rich in cultural resources and has a wide range of monuments, buildings, diversified languages, dance forms, sculptures, religions, etc.
- In 1972, the General Conference of UNESCO adopted a resolution named 'Convention concerning the protection of the World Cultural and Natural Heritage.'
- The Archaeological Survey of India (ASI) under the provisions of the AMASR Act, 1958 makes decision to bring a monument under its protection.
- The Indian civilization is undoubtedly a gifted architecture which has evolved through centuries and comprised different periods of history. Specimens of Indian architecture were first witnessed in the Indus Valley Civilization and later on in the Buddhist monasteries in India.

## 2.13 KEY TERMS

- **Abiotic Resources:** Non-living resources (e.g., petrol, land, minerals, etc.) that are not able to replace themselves or do so at such a slow rate that they are not useful to consider them in terms of the human life times.
- **Biotic Resources:** Living resources (e.g., forest, agriculture, fish and wild life) that are able to reproduce or replace them.
- **Exhaustible Resources:** These resources are limited in nature and they are non-maintainable, e.g., coal, petrol and some minerals.
- **Inexhaustible Resources:** Resources which are not changed or exhausted by man's activities and are abundantly available are said to be inexhaustible.

NOTES

- **Non-recyclable Resources:** These resources cannot be recycled in any way, e.g., fossil fuels and uranium, which provide 90 per cent of our energy requirements.
- **Non-renewable Resources:** The resources that cannot be replenished through natural processes and are available in limited amounts, which cannot be increased.
- **Recyclable Resources:** These are non-renewable resources which can be collected after they are used and can be recycled.
- **Renewable Resources:** Resources that can be replenished through rapid natural cycles and are able to increase their abundance through reproduction and utilization of simple substances.
- **Soil Erosion:** Defined as the movement of soil components, especially surface-litter and top soil from one place to another.

## 2.14 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The basic ecological variables—energy, space, time and diversity are sometimes together called natural resources. These natural resources maintain the ecological balance among themselves.
2. The two categories of natural resources are renewable and non-renewable resources.
3. Soil erosion, waterlogging, salinization and contamination of the soil with industrial wastes like fly ash, press mud or heavy metals all cause degradation of land.
4. The thick, gaseous cover of air surrounding the earth is called atmosphere. It sustains life on earth by removing dangerous cosmic and ultraviolet rays through absorption, provides oxygen for respiration and carbon dioxide for photosynthesis.
5. The two ways in which water is used by human beings are: (i) Water withdrawal (ii) Water consumption.
6. Some of the characteristics of water are:
   - It remains in the liquid form over a broad range of temperature i.e., from 0 to 100°C.
   - The specific heat of water is 1 calorie / gram °C due to which its temperature increases and decreases very gradually without causing much fluctations in temperature and hence protecting the aquatic life.
   - It has high latent heat of vapourization. Hence, it takes huge amount of energy for getting vapourized and produces a cooling effect as it evaporates.
   - It is an outstanding solvent for numerous nutrients. Hence, it acts as a very good carrier of nutrients, including oxygen, which are vital for life. It can also easily dissolve various pollutants and become a carrier of pathogenic micro-organisms.
   - It has high surface tension and unity due to which it can easily rise through great heights, through tree trunks even in the tallest of the trees like Sequoia.
7. Forests are basically used for commercial and ecological purposes.





NOTES

8. The major causes of deforestation are:
   - Shifting cultivation
   - Fuel requirements
   - Raw materials for industrial use
   - Development projects like dams
   - Growing food needs
   - Overgrazing
9. Minerals are generally used for development of industrial plants, generation of energy, construction, equipment and armament for defence, transportation, medical system, communication, and jewellery.
10. Agriculture also makes an impact on the usage of land as follows:
    - Deforestation
    - Soil erosion
    - Depletion of nutrients
11. Some of the obstacles that one comes across while maintaining cultural harmony are:

    Globalization: Globalization is causing fear of differences in views, therefore, breaking the uniformity of culture.

    Marginalization: Marginalization, also known as social exclusion means the formation of social groups by individuals who are reluctant to change their ideologies and principles. They are normally, reluctant to accept any modification happening in the society. This becomes a major hurdle in the way of cultural harmony.

    Age-old traditions: Traditions which are continuing from a very long period lose their core meaning with the passage of time. These prolonged traditions create a gap between the elderly group of people and the youth. This gap between the thought processes of two generations blocks the development of cultural harmony.
12. Some of the specimens of art\architecture that exist in Indian history are:
    (i) Agra Fort, Agra
    (ii) Ajanta Caves
    (iii) Ellora Caves
    (iv) Mahabalipuram group of Monuments
13. Some of the architectural styles that existed during the different time periods are:
    (i) Temple Architecture
    (ii) Rock Cut Architecture
    (iii) Cave Architecture
    (iv) Ancient Architecture
    (v) Indo Islamic Architecture
    (vi) Colonial Architecture

NOTES

## 2.15 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. What are renewable and non-renewable resources? Give examples.
2. Give a brief account of non-renewable energy resources.
3. What is soil erosion? How can it be checked?
4. How can you, as an individual, conserve different natural resources?
5. What is your perception of the cultural resources of India?
6. What are the uses of various types of minerals?
7. What is overgrazing? How does it contribute to environmental degradation?

### Long-Answer Questions

1. Discuss the major uses of forests. How would you justify that ecological uses of forest surpass its commercial uses?
2. What are the major causes and consequences of deforestation?
3. Discuss with the help of examples around you, how big dams have affected forests and the tribals.
4. What are major causes for conflicts over water? Discuss one international and one interstate water conflict.
5. Should we build big dams? Give reasons for your answer.
6. Write a short note on cultural resources.
7. What are the steps that can be taken to promote and protect the cultural resources?

## 2.16 FURTHER READING


Bell, D.; *The Coming of Past Industrial Society*, Arnold Heinman Publication, New Delhi, 1974.

Bhatia, S.C (ed).; *Papers in Environmental Education*, IUACE, New Delhi, 1984.

Carson, R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

Chakraborty, S.C. (ed); *Value Orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Grossland, R.W., & Moor, S.F.D.; *Environmental Studies Project: An Evaluation Report*, Macmillan, London, 1974.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.






NOTES

# UNIT 3 ENVIRONMENTAL RESOURCES MANAGEMENT

### Structure


3.0 Introduction
3.1 Unit Objectives
3.2 Natural Resources and Associated Problems
  3.2.1 Causes of Environmental Degradation
  3.2.2 Steps for Prevention of Environmental Degradation
  3.2.3 Saving Resource from Depletion
3.3 Natural Disasters/Hazards and their Management
  3.3.1 Types of Environmental Hazards/Disasters
  3.3.2 Disaster Management Cycle
3.4 Environmental Awareness
  3.4.1 Objectives of Environmental Awareness
  3.4.2 Education and Environmental Awareness
  3.4.3 Attitudinal Changes and Environmental Education
3.5 Summary
3.6 Key Terms
3.7 Answers to 'Check Your Progress'
3.8 Questions and Exercises
3.9 Further Reading


## 3.0 INTRODUCTION

Rapid growth of human population has made direct assault on the natural resources. Father of our Nation Mahatma Gandhi indicated that even today earth has enough for the 'needs' of man but not for the 'greed'. Thus, the exploitation of nature driven by human greed and ignorance has been the root cause of pollution and environmental degradation. A rational evaluation would demonstrate that explosion in human population, deforestation, urbanization, industrialization, and blind race towards development are the real culprits of the environmental crisis. The environmental concern in India dates back to the Vedic period. The Upanishads outline the ethics of protecting the resources for the use of future generation. The so-called progress associated with the technological revolution and a wild race to accord greater technological development has subdued the concern for environmental conservation. There is a gap between the economic theory of value and the empirical measurement of benefits. It exists in large part because of the difficulties in determining this relationship.

The adverse changes by human activities in the environmental quality at local level is generally called pollution, but sometimes the affects of human activities are so wide that the environment is degraded at global and regional level as well.

In this unit, you will study about the management of natural resources.

## 3.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the problems associated with natural resources
- Explain the causes of environmental degradation
- Describe the basic steps involved in the prevention of environmental degradation
- Discuss various man made disasters and their prevention
- Interpret the role of education in environmental awareness
- List different sources of formal and non-formal education for environmental awareness

## 3.2 NATURAL RESOURCES AND ASSOCIATED PROBLEMS

Environmental degradation means overall lowering of environmental qualities because of adverse changes brought in by human activities in the basic structure of the components of the environment to such an extent that these adverse changes affect adversely all biological communities in general and human society in particular.

To check the degradation of the environment and to restore the balance of nature is the single most important challenge to mankind. Hazel Henderson explained in her book, *Creating Alternative Future*, 'Whether we designate them as "energy crises", "urban crises", "environmental crises or population crises" we should recognize the extent to which they all are rooted in the larger crises of our inadequate narrow perception of reality.' The expressions 'environmental pollution' and 'environmental degradation' are used interchangeably but these are different concepts and have different meaning.

- The degradation of environment is caused by pollution and hazards/disasters. The hazards or disasters are sudden natural processes or are caused by human activities which require immediate relief. It is required that prediction is made for safeguarding against them.
- Environmental pollution is taking place due to slow and gradual human activities, e.g., increase in human population, establishment of factories and industries, development of transportation facilities, etc. Environment pollution degrades the quality of the environment which can be protected by proper environmental management and assessment.
- Environmental degradation leaves direct impact on the ecology and thus cause ecological imbalance due to marked reduction in the ecosystem and ecological diversity.
- Environmental degradation can be summarized as, 'When the environment becomes less valuable or damaged, it means that environmental degradation has occurred.' In environmental degradation
  - o Habitats are destroyed
  - o Biodiversity is lost
  - o Natural resources are depleted
  - o Environment is hurt due to loss of forests, ozone depletion, and marine environment destruction





### Factors of Environmental Degradation

Degradation occurs due to the following reasons.

- Vigorous interaction of socio-economic, institutional and technological activities
- Unsustainable economic growth
- High population growth
- Rapid urbanization
- Intensification of agriculture
- Increased use of energy and transportation
- Poverty

Some major factors are given as under:

- Deforestation, i.e., excessive cutting of trees and forests
- Overpopulation
- Pollution of air, water, soil and marine
- Depletion of ozone layer
- Global warming
- Unplanned development, urbanization and industrialization
- Emission of poisonous gases
- Right and manageable use of energy
- Excessive use of resources
- Mismanagement of waste disposal
- Poisonous waste poured into rivers and sea
- Unequal distribution of resources
- Lack of environmental awareness and appropriate legislation
- Uncontrolled laws
- Decrease in the nutritive value of products

### 3.2.1 Causes of Environmental Degradation

With the socio-economic, scientific and technological development, serious problems of environmental degradation have emerged. Some causes are:

1. **Religious Causes:** Sometimes, religious values degrade the air and marine environment. Mixing dead bodies, their ash, submerging statues of Gods and burning of idols are the main causes.
2. **Development of Modern Technology:** Although the modernization of a country is required, but excessive development causes imbalance in nature. Use of air conditioners, various means of transportation, use of heavy machineries, construction of dams, use of chemical and nuclear techniques are causing severe environmental degradation.
3. **Agricultural Development:** To increase the yields of crops an excessive use of chemicals, pesticides and fertilizers are being used. Again chemicals are used in large quantities for ripening fruits. All these factors degrade the quality of soil as well as nutritive value of products.
4. **Population Growth:** Increasing population causes excessive consumption of resources, which in turn creates imbalance of nature.

NOTES

5. **Deforestation:** Population increase also affects deforestation because forest land is converted into agriculture land and for residential and industrial use.
6. **Industrial Development:** As industries are introducing new products, these are also introducing harmful gases and waste products into the environment.
7. **Urbanization:** Modernization is affecting rural areas. Therefore, the villagers are now migrating towards cities for education, jobs and comforts. These cause more slum area in big cities, more houses to live, and more resource to use.
8. **Overuse and Dearth of Resources:** Resources are used excessively and are wasted due to lack of awareness.
9. **Natural Calamities:** Floods, drought, cyclone, excessive rain, earthquakes, volcanoes, acid rains and ozone depletion cause environmental degradation.
10. **Abrupt Environmental Changes:** Global warming, unpredictable behaviour of weather, desertification and rise in sea level are the main causes for environmental changes and the loss of quality of environment.
11. **Biological Hazards:** Cutting of trees, hunting of animals, disposal of biological waste, contamination of air and water by viruses and bacteria spread epidemics. All these cause the degradation of environment. The fertility of soil decreases, which affects the production.
12. **Domestic Instability:** It results in the reduction in economic opportunities.
13. **Unpredictable Behaviour of Weather:** As the environmental balance is getting disturbed, the weather is also changing. Day temperatures are increasing and the night temperature is decreasing to a great extent. Rainfall patterns have been changing with increased droughts in some areas and heavier rains in others, winds are increasing in power and cyclone frequency is increasing.
14. **Eradication of Habitat and Species Extinction:** Due to imbalance of nature, shortage of living space, increase of air and water pollution, excessive hunting and lack of proper food, water, temperature and extreme climatic changes, some animal species are getting extinct.
15. **Rise in the Sea level:** Due to global warming, the glaciers are melting. It is causing a rise in the sea level. In fact some of the countries and even some Indian cities like Mumbai are in the danger list of getting submerged.
16. **Scarcity of Portable Drinking Water:** Water consumption is unfairly distributed. The per capita water conscription in the United States is about 2300 $m^3$ per annum, as compared to 1500 $m^3$ for the Canadians and 225 $m^3$ for the British. The average per capita consumption of water in the developing countries ranges between 20 to 40$m^3$. However, due to excessive use of water resources and water pollution the scarcity of portable water is caused.
17. **Global Warming:** Due to the exhaust gases from vehicles and industries and the use of dangerous chemicals, the atmospheric temperature is increasing and causing global warming.
18. **Acid Rain:** Various gases from exhaust fumes increase the amount of carbon content in the air. The rain water mixes with gases like $CO_2$ and $SO_2$ and form acids. These acid rains cause damage to crops and human and natural habitations.





NOTES

19. **Desertification:** Excessive cutting of trees, industrialization and changing forest or green lands into desert are causing havoc across the world. Concrete jungles are cropping up at the cost of natural jungles, thus, creating a massive imbalance in nature.
20. **Acute Diseases:** Lack of green healthy areas, hygienic conditions, spreading slums and overpopulation are the reasons that are causing viral and bacterial diseases to human beings as well as animals. The death rates are increasing due to new viral diseases like Rota virus, Brain fever, and Swine Flu.
21. **Deterioration of Land and Soil:** Fertile lands are now converted into colonies and industrial institutions. Fertile soil is deteriorating in quality due to excessive cropping, use of chemicals and fertilizers and bad irrigation practices. It is affecting the yields of crops and economy of the nation.
22. **Environmental Racism:** Environmental racism is also one of the causes of environmental degradation. According to this concept, environment degradation caused by the developed world during the past few centuries is justified on the account of development and civilization, while the developing and third world countries undergoing the initial stages of development are blamed for the rise in pollution levels across the world.
23. **Reduction in Economic Opportunities:** As agricultural lands are being converted into residential colonies and industries, rural population is migrating towards urban areas. Excessive migration of people causes unemployment. Degradation of the resource base has a negative affect on production which in turn affects income.

### 3.2.2 Steps for Prevention of Environmental Degradation

There has been a change in people's viewpoints towards environmental awareness. If one accepts that—

(a) People live in a delicate environment which is being over-exploited and ignored and the fact that people now need to focus their attention towards regeneration and restoration of the environment.

(b) The environment belongs to the people hence, people by organizing themselves in groups, societies, cooperatives and associations should collectively work together towards the development, conservation and restoration of the environment.

Some steps that can be taken for prevention are as follows:

- Rehabilitation of degraded land
- Change in institutional arrangements
- Reforestation programmes
- Thought for renewable energy resources
- Creating mass awareness
- Setting of environmental issues in syllabus
- Feedback mechanism for different regions
- Role of state government in building up the laws and rules for conservation
- Transformation of science and technology knowledge
- Alternatives for waste disposal and management of waste material

NOTES

- Reduction and control of greenhouse gases; check on emission of gases
- Role of regional and international organizations
- Role of mass media, print media and electronic measures
- Role of Government in developing pro-environmental policies
- Introduction of new techniques, e.g., geothermal, geo-engineering, filters, catalytic converters in vehicles
- Alternative sources of energy
- Injunction of $SO_2$ into stratosphere
- Encourage communication among people for assessment and reduction of disasters
- Assessment of impact of plans, projects, dams, reservoirs, factories and deforestation on human life
- Education provisions for moral and religious values
- Education for general awareness and optimum economic value of resources

The Environmental Management Plan (EMP) includes the following steps to maintain the quality of environment.

- Safeguard and prevent the adverse environmental impacts
- Plans for dealing with accidents and disasters
- Plans for rehabilitation
- Monitoring and feedback mechanisms on the implementations of necessary safeguards

Several approaches are adopted to counter the effects:

**Recycling:** Reprocessing of waste product for reuse, e.g., paper, plastic.

**Restrictions:** A check on the use of DDT; encouraging pollution-free fuels.

**Organizations controlling:** Direct and non-violent activities by groups.

On the contrary, people have become increasingly aware about the importance of environment and its conservation. People have now changed their perspective towards the poverty problem in developing countries. In recent times, the global community and the central government of various countries have developed a tendency not to appreciate the necessity for combining poverty alleviation programmes along with environmental management in rural areas. Various efforts in this direction are being taken by NGOs and other voluntary organizations but the scope of these efforts small and at a local level. Simultaneously, the viewpoint of rural people towards their environment and a better relationship with it has also changed.

The recent developments, such as launching of World Conservation Strategy (1984) and the Report of the World Commission on Environment and Development–Our Common Future–culminated into Agenda 21 agreed upon by 170 nations and adopted at the United Nations Conference on Environment and development held at Rio, Brazil in June 1992.

Agenda 21 takes into account all areas/subjects with bearing on global environment. It also covers different areas which could be employed to promote environmentally sound development policies. Some of the subjects are poverty, consumption patterns, demographic dynamics, deforestation, desertification, etc.





NOTES

Agenda 21 suggested:

- Safeguarding and promoting human health conditions
- Combining environment and development in decision-making
- Protection of the atmosphere
- Combating deforestation
- Managing fragile ecosystems; combating desertification and drought
- Managing fragile ecosystems and sustainable mountain development
- Promoting sustainable agriculture and rural development
- Conservation of biological diversity
- Environmentally sound management of biotechnology
- Protection of the oceans, all kinds of seas, including enclosed and semi-enclosed seas, and coastal areas and the protection, rational use and development of their living resources
- Protection of the quality and supply of fresh water resources application of integrated approaches to the development, management of toxic chemicals including prevention of illegal international traffic in toxic and dangerous products
- Environmentally sound management of toxic chemicals including prevention of illegal international traffic in toxic and dangerous products
- Environmentally sound management of hazardous wastes, including prevention of illegal international traffic in hazardous wastes
- Environmentally sound management of solid wastes and sewage-related issues
- Safe and environmentally sound management of radioactive wastes
- Scientific and technological community
- Strengthening the role of farmers
- Transfer of environmentally sound technology
- Science for sustainable development
- Promoting education for public awareness and training
- Integrated approach to the planning and management of land resources

### 3.2.3 Saving Resource from Depletion

Imagine a world of spiralling food prices, water shortages and soaring energy costs. For many living in the world today, this nightmare scenario is already a reality. Even for the well-off living in developed economies, it is becoming all too familiar. And on current projections, it is going to get a whole lot worse. Short-term fluctuations in supply and demand aside, a global population explosion combined with finite resources means that the planet cannot sustain ever-increasing levels of consumption using current models of production.

But it is not just physical depletion that leads to scarcity. For some resources, political and financial factors can escalate the problem, particularly in the short-term.

A recent survey by consultants PricewaterhouseCoopers (PwC) found, a shortage of key minerals and metals could 'disrupt entire economies'. It compiled a 'critical list', including lithium, which is widely used in batteries and wind turbines, cobalt, again a key component in rechargeable batteries, and tantalum, which is used in mobile phones and computers.

NOTES

Geologists prefer not to speculate on the planet's finite reserves of these valuable resources, some of which are already running low, for the simple fact that more could be discovered, but political factors alone make them hard to come by.

China, for example, where most so-called rare-earth elements are found, severely restricts exports to other countries. India and Vietnam have also curbed exports of mineral resources and the pressure for other countries to follow suit is growing.

Equally, increasingly volatile commodity prices, borne in part of increasing uncertainty over supply, mean companies are less willing to invest in discovering new supplies as they are unsure of the return they will make on their investment.

This creates a potential vicious circle, where volatile prices have an impact on supply, making prices yet more volatile, all the while exacerbating the problem of scarcity.

### Radical Solution

Clearly, then, something needs to be done if humans are to live within the resources that the Earth has. Some argue that the answers are already there. Productivity improvements would alone help meet almost 30 per cent of demand for resources by 2030 and present trillions of dollars of savings to global companies. New technologies, substitute materials and greater investment in supply will also be needed. McKinsey estimates that about $3trillion a year would help meet demand for steel, water, agricultural products and energy. This is about 50 per cent more than current investment. Others argue more radical solutions are required.

Policy intervention is needed to protect resources that are not priced or incorrectly priced. Water is a case in point. Despite being the world's most precious and increasingly scarce resource, it is incredibly cheap, and in many parts of the world, free. Correcting this price anomaly would have huge consequences for businesses. Trucost has calculated that more than a quarter of profits of the world's biggest companies would be wiped out if water was priced to reflect its value, as it must be.

Land is another example. Huge chunks of the natural world have no monetary value yet they provide services worth trillions of dollars to the global economy. Only now is this value being recognized and painstakingly calculated. Energy efficiencies, renewable energy and a massive increase in recycling will also be needed. Some are even calling for what is known as a circular economy, a comprehensive rethink of our current model of production and consumption, where one company's waste is another's raw material, and where obsession with the ownership of material goods is moderated. One thing is certain, as things stand, the numbers do not add up and the odds are stacked against us. Drastic change is needed.

### Check Your Progress

1. List some of the factors responsible for environmental degradation.
2. What are the steps that can be taken to prevent environmental degradation?
3. State the steps that can be taken to maintain the quality of environment under the Environmental Management Plan (EMP).





NOTES

## 3.3 NATURAL DISASTERS/HAZARDS AND THEIR MANAGEMENT

The events caused by natural processes on human activities are called extreme events. These disturb and degrade natural environment causing disaster for the human society. For example, floods, droughts, cyclone, heavy rains, volcano and earthquakes make adjustment difficult for human beings and loss of property and lives is caused.

The terms environmental hazards, environmental stresses and environmental disaster are used simultaneously when there is a dramatic effect on natural resources, ecosystem and human beings.

The environmental disasters are defined in terms of:

1. **Extreme event:** Disasters are the extreme events which are caused either by natural changes or by man's activity. These changes destabilize the fauna and flora, therefore loss of life and property occurs.
2. **Abnormal process:** The environmental disasters are again defined as abnormal processes made by human beings. The excessive loss of heat and gases from vehicles, air conditioning, burning of waste, mixing of industrial waste in rivers, use of pesticides, and disturbance in the composition of air and water cause loss of life and vegetation.
3. **Environmental stress:** Environmental stress occurs when lives and property are affected by sudden natural hazards.

### What is a hazard? How is it classified?

Hazard is a dangerous condition or events that threaten or have the potential for causing injury to life or damage to property or the environment. They can be categorized in various ways but, based on the origin, hazards worldwide are basically grouped into two broad headings:

1. Natural Hazards (hazards with meteorological, geological or even biological origin)
2. Unnatural Hazards (hazards that are caused by humans or technological origin)

It is also important to know that natural phenomena are extreme climatological, hydrological, or geological, processes that do not pose any threat to persons or property. A massive earthquake in an unpopulated area, for example, is a natural phenomenon, *not a hazard.* It is when these natural phenomena interact with the man-made environment or fragile areas which cause widespread damage.

### What are disasters?

Almost everyday we witness in the newspaper or on the TV, reports of disasters around the world. So what are disasters? How are they different from accidents? Disaster is defined as: 'A serious disruption of the functioning of a society, causing widespread human, material, or environmental losses which exceed the ability of the affected society to cope using its own resources.'

A disaster is the product of a hazard such as earthquake, flood or windstorm coinciding with a vulnerable situation which might include communities, cities or villages. There are two main components in this definition: hazard and vulnerability. Without vulnerability or hazard there is no disaster. A disaster occurs when hazards and vulnerability

meet. There are several important characteristics that make disasters different from accidents. The loss of a sole income earner in a car crash may be a disaster to a family, but only an accident to the community. Variables such as causes, frequency, duration of the impact, speed of onset, scope of the impact, destructive potential, and human vulnerability determine the difference.

The difference between a hazard and a disaster is that a hazard is a part of the natural environment whereas disasters occur only when a hazard and development intersect and significant damage to the built environment results. Hazards can occur and cause no damage to humans or the built environment and so there is no disaster.

### 3.3.1 Types of Environmental Hazards/Disasters

When the discharged residuals spoil the ambient environmental quality, it causes changes in the flow of environmental services and the uses man makes of the environment.

#### Physical Hazards and Disasters

Environmental pollutants arise from many sources and exposures may occur through different routes. For instance, earthquake causes injury or destroys property. Landslides or flooding disasters are closely linked to rapid and unchecked urbanization that forces low-income families to settle on steep hillsides or ravines or along the banks of flood prone rivers. Famines can be closely linked to shortages caused by rural unemployment or a sudden influx of refugees into a country from a strife-torn neighbouring country. High numbers of deaths accompanying earthquakes almost always result from structural collapse of poor, low-cost houses.

Deforestation, desertification, erosion, over-cultivation, overgrazing, urbanization caused by migration from villages to the towns, excessive constructions and spreading of towns are the factors that are causing physical hazards and disasters. The damaged area in such disasters is usually relatively small, while the area affected in a continuing disaster may be extremely large.

#### Chemical Hazards

Millions of people in the developing world are on a regular basis exposed to extremely harmful indoor emissions, which are considered to lead to persistent lung diseases and cancer. The sources are:

- Emission of toxic gases like $SO_2$, NO, Ozone, CO, $CO_2$ as the by-products of energy production, industry and transportation.
- Emission of smoke and soot by burning of biomass fuels such as dung and wood, burning of garbage, fires and domestic exhaust causing acid rains.
- The use of pesticides, fertilizers, organic compounds and manures causes contamination of surface water or ground water and soil. Pesticides and organic compounds which degrade at a slow pace tend to remain in the environment for years which thus, amass in animals and human diseases.
- Chemicals like PCBs, leaded gasoline, lead-based paints, 1,2-dibromo-3-chloropropane-D.D.T. leave a very unsustainable trail in the environment.

The reproductive organs of seabirds and other wildlife were damaged due to the unfavourable effects of DDT. In addition, some chemicals also produced adverse effects by disturbing the normal functioning of the body. Approximately, 74 chemicals or mixtures have been found to cause cancer in humans.





Hundreds of other chemicals cause cancer or mutations in cells or in animals which raises concerns about their effects on humans.

- Ozone layer depletion is a cause of great concern. Burning of fossil fuels causes air pollution and leads to global warming. Excessive heat causes breaking of ozone layer and this exposes earth to ultraviolet radiation. Skin cancer and other vector borne diseases come to stalk the normal pace of human and ecological systems.
- Leakage of oil and fire in oil tanks causes great risk to man and environment. Leakage of oil in Bombay and fire in oil tanks in Jaipur affected human beings and marine fauna.
- Bomb explosions come at the risk of big ecological and human costs. Nitrogen, hydrogen and sulphur salts are used for blasts. Not only casualties but toxicity in the air is also caused.

#### Social Hazards and Disasters

- Rapid population growth
- Inequitable patterns of land ownership
- Urban migration
- Lack of education
- Subsistence agriculture on marginal lands
- Unsafe location of buildings and settlements
- Unsafe homes
- Malnutrition
- Unemployment and under-employment
- Illiteracy
- Poverty
- Downfall in moral and religious values
- Wars, strikes and riots
- Multistoried buildings
- Residential and industrial use of agriculture land
- Lack of awareness
- Antisocial activities
- Recreational uses of ecosystem (fishing, hunting)
- Overproduction of food products, milk, etc.
- Adulteration

Man is the product of his social as well as his physical environment. In time of disaster, these strong bonds manifest themselves and take precedence over his ordinary behaviour. Social response to natural and man-induced disasters is generally in the positive direction. There should be check on human population by introducing family planning programmes.

#### Biological Hazards and Disasters

Up to 17 million deaths every year take place due to contagious and parasitic agents.

1. **Microbial threats:** Viruses, bacteria, protozoa and Helminths cause sickness. Insufficient access to clean water, sanitation and poor hygiene leads to cholera

and other diarrheal diseases. Inadequate water supply and inappropriate preparation of food or unhygienic conditions give rise to intestinal worms.

2. **Insect borne diseases:** According to figures provided by WHO, approximately 300 to 500 million people die due to malaria every year. The growth of mosquito requires a particular combination of altitude, rainfall, heat and humidity and available surface water. Anopheles is propagated in stagnant contaminated water stores and causes thousands of malarial deaths even to this day.
3. **Soil borne diseases:** The dirty and polluted soil get carried into homes on the soles of the feet. This leads to infection which takes place recurrently and the disease becomes more serious as the worms build up their strength in the body.
4. **Airborne diseases:** Contaminated air is caused by sewage, garbage disposal, open drainage system and decaying of biological waste. Around 4 million people every year die due to such symptoms. It is also the leading cause of death among children below the age of five. According to the estimate of World Bank in 1992 the use of better fuels can decrease the number of pneumonia deaths by almost half.

   Other diseases like tuberculosis, asthma and skin diseases are caused due to conditions of poverty, below par standards of life in enclosed spaces, crowding and poor hygienic conditions.
5. **Vaccination:** Inspite of mass vaccination efforts organized by the governments of various countries, about 42 million children still fall short of receiving vaccine. Out of which approximately 1 million children die. Measles and diphtheria are just two childhood (vaccine-preventable) diseases. Decline in immunization efforts and disintegration of families and unawareness cause these hazards.

Disaster management mechanism was carried out by the Government of India after Bhuj Earthquake. It was noted that there was a need for building up holistic capabilities for disaster management so as to be able to handle both natural and man made disasters. The subject of Disaster Management was transferred from the Ministry of Agriculture to the Ministry of Home Affairs (excluding drought and epidemics and those emergencies/disasters which were specifically allotted to other ministries). The Government (Allocation of Business) Rules, 1961 were accordingly amended in February, 2002. A strategic roadmap has been drawn up for reducing the country's vulnerability to disasters. The road map will be reviewed every two years to see if any change in direction is necessary.

### 3.3.2 Disaster Management Cycle

Disaster management can be defined as the body of policy and administrative decisions and operational activities which pertain to the various stages of a disaster at all levels. Broadly, disaster management can be divided into pre-disaster and post-disaster contexts. Hazards are natural phenomenon, they cannot be prevented. But we can certainly learn to live in harmony with nature by not taking steps that can turn hazards into major disasters. If one takes into account the cost that we finally pay when a disaster strikes that the cost of averting it, we come to a conclusion that it is prudent to be prepared rather than inviting the wrath of nature on a very large scale. There are three key stages of activity that are taken up within disaster management. They are:

- **Before a disaster strikes (pre-disaster):** Activities taken to reduce human and property losses caused by the hazard and ensure that these losses are also minimized when the disaster strikes. Risk reduction activities are taken under this stage and they are termed as mitigation and preparedness activities.
- **During a disaster (disaster occurrence):** Activities taken to ensure that the needs and provisions of victims are met and suffering is minimized. Activities taken under this stage are called as emergency response activities.
- **After a disaster (post-disaster):** Activities taken to achieve early recovery and does not expose the earlier vulnerable conditions. Activities taken under this stage are called as response and recovery activities.





### Preventing Disaster

### 1. Personal and community awareness

As Indians we need to be aware of likely hazards and potential hazards, how, when and where they are likely to occur, and the problems which may be a result of an event. With 60 per cent of the land mass susceptible to seismic hazard damage (Moderate, High and Very High Zone); 40 million hectares (8%) of landmass prone to floods; 8000 Km long coastline with two cyclone seasons; 68 per cent of the total area vulnerable to drought; Hilly regions vulnerable to avalanches/landslides/hailstorms/cloudbursts; other human caused hazards, it is important to be aware of how to cope with their effects.

During the time of a disaster there will be delay before outside help arrives. At first, self-help is essential and depends on a prepared community – that is a community which has:

- An alert, informed and actively aware population
- A Preparedness and Response Plan
- An active and involved local Government,
- Agreed, coordinated arrangements for response, preparedness and mitigation measures.

### In case of tsunami

*Hazard mapping:* A hazard map should be prepared with designated areas expected to be damaged by flooding by tsunami waves. Historical data could be of help in showing areas inundated in the past. Keeping in mind the vulnerable areas, evacuation routes should be constructed and mapped. The plan should be followed by evacuation drill.

*Early warning systems:* A well networked system in place can warn the communities of the coastal areas when the threat is perceived. Tsunami warning should be disseminated to local, state, national as well as the international community so as to be prepared as they are capable of crossing across continents. The information can be broadcasted to the local emergency officers and the general public. On receiving of the warning, the action should be to evacuate the place as decided in the evacuation plan.

*Community preparedness:* Communities in the coastal areas are faced by the wrath of cyclones, storm surge and tsunami waves. It is important that the community is better prepared to take suitable actions on receiving of the threat and follow emergency evacuation plans and procedures. Communities which choose to ignore warning may get severely affected if they are not prepared to take immediate measures.

NOTES

## Main Mitigation Strategies

1. **Site planning and land management**: Within the broader framework of a comprehensive plan, site planning determines the location, configuration, and density of development on particular sites and is, therefore, an important tool in reducing tsunami risk.
   - The designation and zoning of tsunami hazard areas for such open-space uses as agriculture, parks and recreation, or natural hazard areas is recommended as the first land use planning strategy. This strategy is designed to keep development at a minimum in hazard areas.
   - In areas where it is not feasible to restrict land to open-space uses, other land use planning measures can be used. These include strategically controlling the type of development and uses allowed in hazard areas, and avoiding high-value and high-occupancy uses to the greatest degree possible.
   - The capital improvement planning and budgeting process can be used to reinforce land use planning policies.
2. **Engineering structures**: As most of the structures along the coast area comprises of fisherman community, which are constructed of light weight materials without any engineering inputs. Therefore, there is an urgent need to educate the community about the good construction practices that they should adopt such as:
   - Avoid building or living in buildings within several hundred feet of the coastline as these areas are more likely to experience damage from tsunamis.
   - Construct the structure on a higher ground level with respect to mean sea level.
   - Elevate coastal homes: Most tsunami waves are less than 3 meters in height. Elevating house will help reduce damage to property from most tsunamis. Structural columns resist the impact while other walls are expendable. It is important to also take note that adequate measures are brought into the design to cater for earthquake forces.
   - Construction of water breakers to reduce the velocity of waves.
   - Use of water and corrosion resistant materials for construction.
   - Construction of community halls at higher locations, which can act as shelters at the time of a disaster.

**Flood management:** Flooding will result from a tsunami. Tsunami waves will flood the coastal areas. Flood mitigation measures could be to building barriers or buffers such as special breakwaters or seawalls can be an effective risk reduction measure against gushing waters in case of tsunami/storm surge during cyclones.





NOTES

## National disaster management framework

### I. Institutional Mechanisms

| Expected Outputs | Areas of intervention | Agencies/sectors to be involved and resource linkages |
|---|---|---|
| Nodal agency for disaster management at the national level with appropriate systems | (i) Constitution of National Emergency Management Authority with appropriate legal, financial and administrative powers<br>(ii) Roles and responsibilities of the NEMA:<br>• Coordinating multihazard mitigation, prevention, preparedness and response programmes<br>• Policies for disaster risk reduction and mitigation<br>• Preparedness at all levels<br>• Coordination of response<br>• Coordination of post disaster relief and rehabilitation<br>• Amendment of existing laws, procedures, instructions | Ministries/Departments of Health, Water Resources, Environment and Forests, Agriculture, Railways, Atomic Energy, Defence, Chemicals, Science and Technology, Rural Development, Road Transport and Highways |
| Creation of State Departments of Disaster Management | Departments of Relief and Rehabilitation to be re-designated as Department of Disaster Management with enhanced areas of responsibility to include mitigation, prevention and preparedness | State Government/UT Administration |
| Setting up State Disaster Management Authorities | (i) State Disaster Management Authority to be headed by the Chief Minister<br>(ii) The Authority to lay down policies and monitor mitigation, prevention and preparedness as also oversee response | Ministers for Agriculture, Home Disaster Management, Water Resources, Health, Road and Transport, Civil Supplies, Environment and Forests, Rural Development, Urban Development and Public Health Engineering Departments as Members |

NOTES

## II. Disaster Mitigation/Prevention

| | | |
|---|---|---|
| Disaster mitigation/prevention to be mainstreamed into the development process. | (i) Each Ministry/Department which has a role in mitigation/prevention will make appropriate outlays for schemes addressing mitigation/prevention.<br>(ii) Where there is a shelf of projects/schemes, projects/schemes contributing to mitigation to be given a priority.<br>(iii) Wherever possible schemes/projects in areas prone to natural hazards to be so designed as to contribute to mitigation, and preparedness.<br>(iv) Projects in vulnerable areas/areas prone to natural hazards to be designed to withstand natural hazards. | Ministries/Department of Govt. of India/State Governments/ UT Administration |
| Techno-legal regime | (i) Regular review of building codes and its dissemination | Bureau of Indian Standards/Ministry of urban Development |
| | (ii) Construction in seismic zones III, IV and V to be as per BIS codes/National Building Codes. | State Urban Development Department/Urban Local Bodies |
| | (iii) Construction in areas vulnerable to cyclones to be so designed as to withstand the wind hazard as per BIS codes/National Building Codes. | State Urban Development Department/Urban Local Bodies |
| | (iv) Comprehensive review and compliance of<br>• Town and Country Planning Acts<br>• Development Control Regulations<br>• Planning and Building Standards Regulations | State Urban Development Department/Urban Local Bodies |
| | (v) Put in place appropriate techno-financial regime | State Urban Development Department/Urban Local Bodies |
| | (vi) Capacity enhancement of Urban Local Bodies to enforce compliance of techno-legal regimes | State Governments |
| Land-use Planning and Zoning regulations | (i) Legal framework for Land-use planning and zoning regulations to be reviewed. | Ministry of Urban Development, Department of Land Resources [MORD] |
| | (ii) Zoning regulations to be enforced. | Ministry of Environment and Forests [GOI]/ State Governments |
| Plan schemes for vulnerability reduction and preparedness. | State Governments to formulate Plan Schemes and submit to Planning Commission. | State Governments |



## III. Legal/Policy Framework

| | | |
|---|---|---|
| Disaster Management to be listed in List-III-[Concurrent List] of Seventh Schedule to the Constitution | (i) Bill to be drafted.<br>(ii) Bill to be brought before Parliament | Ministry of Home Affairs/Ministry of Law (Legislative Department) |
| State Disaster management Acts | Model Act to be circulated to the States. | Ministry of Home Affairs<br>State Governments |
| National Policy on Disaster Management | (i) Mainstreaming disaster management into planning and development process.<br>(ii) Mandate safe construction.<br>(iii) Coordinated action by all relevant Departments as per policy. | Ministry of Home Affairs, Ministry of Finance, Planning Commission, Ministry of Environment and Forests, Rural Development, Urban Development and other relevant Ministries to be consulted. |
| States to enunciate Policy on Disaster Management. | (i) Mainstreaming disaster management into planning and development process.<br>(ii) Mandate safe construction.<br>(iii) Coordinated action by all relevant Departments as per policy. | State Governments |
| State Disaster Management | Amendment of existing relief codes/scarcity codes/famine codes to incorporate mitigation, preparedness and planning measures at all levels from community to State constitution of Emergency Support Teams/Disaster Management Teams/Committees/State Disaster Management Authorities, delegation of administrative and financial powers to disaster incident managers etc, protocol to update the inventory of resources and plans, | State Governments |

### Check Your Progress

4. Fill in the blanks.
   (a) Lowering of environmental quality is termed as _____.
   (b) The contamination of environment is known as _____.
   (c) Conversion of rural agriculture land into township and population extension is called _____.
   (d) Cutting of excessive forest/trees is a phenomenon referred to as _____.
5. State whether True or False.
   (a) Recycling of waste helps in the management of environmental hazards.
   (b) Environmental disasters are neither a process nor an event.
   (c) Sudden natural hazards which affect lives and property are called environmental stress.
   (d) Farmers have to use more and more fertilizers to increase the yield.

NOTES

## 3.4 ENVIRONMENTAL AWARENESS

Some scholars use environmental awareness and environmental education interchangeably. However, there is a great difference between these two terms. Environmental education is a comprehensive concept and it includes environmental awareness also. Some definitions of 'Environmental Awareness' are as follows:

- Environmental awareness implies the knowledge and understanding of the issues relating to changes in the environment.
- Environmental awareness makes us aware of the attitudes involved in the environmental issues.
- As environmental education provides the opportunities and situations for performing certain activities and tasks, environmental awareness excludes the operational or practical elements of environmental education.
- Environmental awareness makes us aware to keep surroundings clean.
- Environmental awareness is limited to the knowledge of problems and solutions but does not involve activities.
- Environmental awareness is confined to the cognitive level. It can be imparted from primary stage to university level directly and indirectly through teaching.
- Environmental awareness makes students and general public aware in recognizing ways and means of making effective use of environmental resources for survival, growth and development of the nation.

### 3.4.1 Objectives of Environmental Awareness

To increase people's awareness towards the importance of environmental protection, and to enable them to participate in the efforts of environmental conservation, the government must implement environmental education and awareness programmes. The main objectives for environmental awareness are to:

- Enable the students and public to recognize the interdependence among material and physical environment, plant and animal for survival, and growth and development.
- Enable the students to identify human, material and biological resources.
- Enable the students to learn proper use of environment.
- Enable the students to recognize ways and means of making effective use of environmental resources for social, economical and cultural growth and development.
- Enable the students and public to develop a sense of conservation, and think about alternative sources for future.
- Enable the students to learn and develop moral, economical and social values.

### 3.4.2 Education and Environmental Awareness

Human beings have reached a stage where they are no longer content merely to respond to the environment. They now seek to adapt the environment to their own needs. Since conscious purposes govern the continually expanding area of human activity, any change in social objectives is invariably accompanied by a change in the system of education.





NOTES

#### (a) Priority of environmental education in relation to environmental awareness

Environmental education is a learning process that increases knowledge and awareness about the environment and develops skills that enable responsible decisions and action that impact the environment.

- Environmental education encourages inquiry and investigation.
- Environmental education enables a learner to develop critical thinking, problem solving and effective decision-making skills.
- Enable an individual to understand the values of various sides of an environmental issue.
- At the primary level, environmental education contributes to solve the problem of nutrition and health, and help in recognizing the uses of resources and their prevention and conservation.
- Environmental education is an important factor in fostering social cohesion and democratic government.
- Environmental education is a scientific means of education which especially widens the knowledge in the area of eco-technology and the development of renewable energy resources.
- Environmental education provides motivation, justification and social support for pursuing and applying them.
- Environmental education increases the capacity to transform their visions of society into operational realities.
- The goal of environmental education is to generate awareness among the masses, make them informed with the latest information, be responsible, follow ethical standards, analyse critically a given situation and still continue to learn.
- Environmental education is one of the ways of spreading knowledge and developing skills for bringing about the requisite changes in behaviours, values and lifestyles.

#### (b) Forms of environmental education for environmental awareness

(i) Basic Education
(ii) Formal Education
(iii) Non-formal Education
(iv) Non-Governmental Agencies
(v) Education through Media

**Basic education:** Basic education is the concept formulated by Gandhi. It treats the child as a member of a cooperative group. The school is recognized as a community which offers the most suitable atmosphere for training in citizenship. The basic education is based on the recognition that the child can learn more quickly through active participation in a process than by passive reception of instruction given by a teacher. In basic education, the activity chosen for the training of the child is a purposive, creative and socially useful activity. The system prevalent in India tended to become more and more book-centered. Even in the case of children it became a mere exercise of the memory than a development of intellect, emotions and character.

NOTES

Basic education suggests the following methods and strategies to develop environmental changes and attitudinal changes:

1. **Activity based teaching:** The child is active.
2. **Task oriented assignments:** The child does self activity.
3. **Outdoor observation and self thinking:** The child observes the situation and thinks solution by self decisions.
4. **Cooperative or group learning:** A situation is created where child performs his action in group with cooperation.
5. **Environmental or community based projects:** The opportunity to work for outer world.
6. **Outdoor class:** Freely chosen and self initiated activities outside the classroom.
7. **Self assessment:** Assessment is not memory based but it is task based which the child himself evaluates and feels joy and motivation on satisfactory completion.

The above strategies help a child to:

- Develop a social sense and a sense of responsibility
- Make him aware as a productive agent in society
- Learn the value of cooperation
- Collect information about environment and to find solutions by self-regulating activities
- Feel happy and joyful, and lessen the fatigue and monotony of the subject
- Develop personality, confidence, values and devotion

**Formal education:** Education is the most effective method that society has in hand for dealing with future challenges. Global and local environmental issues are becoming critical year by year, which are to be attributed to climatic changes and human activities. Considering all this, the decision makers all over the world agree that the goal of education reform is to improve learning. Many advocates of education reform are stressing the need to use new approaches in teaching and learning, and changes in curriculum and instructions.

- Content of book should be real world context.
- Link the classroom to the need of community.
- Take away the students from textbook-driven, teacher-led instructions by using 'hands-on and minds-on' strategy.
- Emphasis on cooperative learning in class where students can take part in the learning process with interest, capability and experience.
- Student-driven investigative learning process where students participate actively in collecting data and analyse them to reach a conclusion.
- Activities are decided and guided by teachers to develop critical thinking, problem solving and decision-making skills in students. For this purpose, a problem or research topic is decided and survey method, questionnaire and rating scales are used to collect data and then analysis is done to reach a conclusion.
- There is a need of re-deciding of curriculum. In place of traditional academic subjects, interdisciplinary curriculum must be decided which can connect students to different fields of knowledge.





NOTES

- Lectures, demonstrations and discussions must be done with subject specialist and guest lectures can be organized.
- The literary activities, co-curricular activities like tours, exhibitions, visits must be included in the schedule.
- Library periods must be placed in the routine time table.
- Use of educational technology, CD-ROMs, slides should be used in teaching.

**Environmental education:** Children at pre school level need education for joy, play and wonder rather than books, words and learning facts. Therefore, environmental education for very young students is based on:

(i) Developing a sense of respect and caring for the natural environment during their first few years

(ii) Positive interaction with the natural environment for healthy development

To construct environmental education programme for preschool children the following points are kept in mind.

- *Simple and familiar experiences:* The young children learn better when things are presented in simpler form and things are used which are familiar to them. For example, the teacher using a plant to explain the process of plantation and the fact of forestation.
- *Outdoor positive experiences:* When the concepts of colours, birds, animals, planet and satellites are taught, the children are made to visit the parks, zoo, planetarium and other such places. In this manner, the children can learn through direct realistic experiences.
- *Personal experience in place of teaching:* Young children learn through discovery and self-initiated activities, active involvement, sensory engagement and self-initiated explorations.
- Teaching by creating interest and enjoyment in learning nature's facts.
- *Models of caring and respect for nature:* If the concept of caring and respect is taught then a model of care for plants and respect of animals is shown to them in the class.

**Non-formal environmental education:** Non-formal or out-of-school education plays an essential part in:

- Preservation and improvement of the environment
- Participating in activities contributing to the social, economic and cultural development of the community
- Changing the attitude of all members of a particular community
- Inculcate a sense of responsibility with regard to the management, protection and development of the environment

The fundamental strategy for developing non-formal environmental education is to integrate explicitly into the ever-widening range of out-of-school education programmes already available. In recent years, non-formal education programmes and institutions for carrying them out have increased in number. These programmes are as follows:

- Extend literacy teaching to crash refresher course.
- Courses for manual workers, farmers and civil servants.

NOTES

- Processed not only by education ministries but also cooperated with ministries of labour, industry, agriculture, public health, social welfare, civil organizations, professional associations, trade unions, consumer groups, sports, tourist and cultural associations.
- Programmes are offered to institutions and their role and activities regarding environmental education are explained well in advance.
- Institutions with the help of technical bodies prepare materials for preservation and improvement of environment.
- Some bodies are advised to adapt measures responsible for curricular research, elaboration, experimentation and evaluation to include environmental education among their activities.
- A collaboration between planning institutions and implementing institutions at local, regional and national levels.
- Environmental projects are designed in which technicians, professionals and educators work together.

Kothari Commission suggested the following programmes for non-formal education.

(i) *Literate the illiterates:* In this programme the urban and rural individuals in the age group of 15 to 35 are taught in either evening classes on during day with the help of teaching aids. First objective is to mark them literate and then make them aware of environment. The farmers of rural area are getting advantage of it. They learn several methods of soil protection, quality protection, ways of cropping, adequate use of fertilizers and manures.

(ii) *Continuous and vocational education:* Education is a continuous process, thus, education for awareness of environment is taught with vocational knowledge.

(iii) *Distance education:* Distance education is a very important way of imparting education. Many courses are provided by universities in formal and non-formal education system.

(iv) *Libraries:* The libraries established by universities, departments, clubs, non-government agencies help in distributing environmental knowledge.

There is a need to launch a country-wide movement for providing awareness of environmental pollution and degradation along with eradication of illiteracy.

**Awareness and education through mass media:** At this moment, India is facing environmental problems of extreme enormity that have an unfavourable influence on the lives of its people. However, most of these problems have taken place due to ignorance and lack of understanding about environmental and sustainable development issues. This has led to over-exploitation of natural resources and badly planned development and industrial projects. In order to ensure people make positive choice about the environmental impacts of their lifestyles, there is an urgent need to create mass scale awareness on environmental and development issues.

Mass media are the means or instruments of communication that reach large number of people and students. The media may be printed like newspaper or may take the form of cinema, radio, and T.V. Now new media like Internet and e-mail, etc., are also increasingly being used. Earlier the teacher was the only medium of communication for children. The other means of communication of information, news, ideas, comments,





NOTES

pictures, and the newspapers, the radio and television have a deep impact on the life and culture of the people. Whatever the people read, hear or see at the same time or the same day they think over it, analyse and generally discuss among themselves, exchange their views and judge or think what is good what is wrong about a subject. Media is helpful as it helps in:

- Expansion of literacy and knowledge of environment
- Spreading social education to all groups of society
- Providing useful information about life, its survival and how to make it comfortable
- Shrinking of whole world into a single unit, decrease the distances, make everyone closer
- Converging the issues, problems and solution all over the world into a classroom
- Sending of news in that area where man himself cannot reach easily
- Helping in getting knowledge of action, activities, experiments, researches, discussions carried in different places of a country to the needed place
- Getting ways of solving problems, skills, new additions, references, etc.
- Help in modification of views and values as well as in changing attitudes
- Provide knowledge speedily
- Making the world dynamic—A news reaches speedily to a large group
- Motivating a group when a group performs actions successfully
- Present an example for society to encourage people to participate
- Helping the students by lectures, T.V. shows, discussions in T.V. programmes
- Smart class and active class teach students of each level
- Helping illiterate by hearing and watching radio and T.V. shows
- Some educational channels like Discovery channel and news channels, provide important knowledge about environment and their conservation
- Animated films and cartoon networks also provide useful message by their documentary films
- Providing new techniques and new solutions by Internet and e-mail
- The availability of e-messages, e-ecoclubs, e-journals on the Internet spread new techniques at a time in a large group. New researches help in developing awareness and attitude
- Printed books, published material, encyclopedias help in getting solutions and spread the knowledge
- School broadcast programmes supply knowledge not only related to curriculum but also of general issues of environment
- As T.V. is a quick means of information, it makes visual and aural impressions of fauna, flora, biodiversity, energy conservation, cleanliness and other problems of pollution
- Observing the teaching processes, experimentations and actions of experts
- Educational CD-ROM specially prepared for environmental issues can be helpful for children to collect various type of information
- PowerPoint presentation, Transparencies, LCD shows can explain the content to a large group in less time

NOTES

- Newspapers have more advantages as more details can be provided in the form of news and stories of the latest development of environment, population, science, sports, government policies, national problems, disasters and their management

Despite the explosion of technological media in the developed countries, the teacher still occupies the place of importance.

Environmental education is a learning process that increases knowledge and awareness about the environment and develops critical thinking, problem solving and effective decision making skills.

The National Policy on Education (NPE) 1968 has envisaged the protection of the environment as the core element of education at all levels. The policy has also recommended the creation of environmental consciousness among all ages starting with school education. There is a paramount need to create a consciousness of environment. It must permeate all age groups and all sections of society beginning with the child. Environmental consciousness should be part of teaching in schools and colleges. These aspects should be integrated in the entire educational process.

The coverage of environmental concepts in the curricula materials developed by the NCERT as part of the implementation of the NPE (1936), has been considered to be adequate by the National and International experts in Environmental Education. The instruction materials would enable the children to understand the structure and functioning of the environment and its problems and prepare them to make efforts for it protection and improvement.

Science and social studies are the two main subject areas with intensive coverage of environmental topics. Several topics covered in science, geography, biology, chemistry and economics would help in understanding the structure and functioning of the environment. Several poems and stories on trees, insects, animals, in language subjects like Hindi and English create interest and motivate the children to contribute to the protection of the environment.

The Department of Education in Science and Mathematics of NCERT has undertaken a project (1993) to analyse the school curricula developed by the council as part of the implementation of National policy of Education (1986). The analysis was done to identify the environment education concepts and activities vis-a-vis the universal objectives of education (knowledge, skills, attitudes, participation) as agreed at the Tbilisi Conference (1977).

The Department of Science and Mathematics, on behalf of the NCERT also undertook a UNESCO sponsored case study on environmental education in India. This opportunity provided insight into the present states of environment education concepts and training at the school level, higher education and technical education levels. This would help in strengthening environment education components at the school level. Agenda 21 agreed at Rio conference Brazil in June 1992 on the various subjects suggests analysis of the specific problems concerning each subject and also gives possibilities for procuring resources to initiate and take suitable action.

Chapter 36 of Agenda 21 is titled 'Promoting Education, Public Awareness and Training'. The three programmes are:

(i) Reorienting education towards sustainable development

(ii) Increasing public awareness

(iii) Promoting training





NOTES

**Reorienting education towards sustainable development:** Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. Formal education includes public awareness and training is recognized as a process by which human beings and societies can reach their fullest potential.

The basic education provides the underpinning for any environmental and development education, the latter needs to be incorporated as an essential part of learning. Both formal and non-formal education are indispensable for changing people's attitudes for achieving environmental and ethical awareness, values, attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making.

**Increasing public awareness:** Due to inaccurate or insufficient information, there is still a considerable lack of awareness of the interrelated nature of all human activities and environment. There is a need to increase public sensibility about the environment and development problems. There should also be involvement of the public in finding solutions to environmental problems and a sense of personal environment responsibility and commitment towards sustainable development.

**Promoting training:** Training is one of the most important tools to develop human resources and facilitate the transition to a more sustainable world. Training programmes should promote a greater awareness of environment and development issues as a two way learning process.

## According to Salas (1982)

- Children should frequently leave the classroom to study various environments first hand.
- The school and the community should learn to communicate with each other about environmental problems and decisions.
- The school and community should interact for the improvement of environmental quality.
- The school and community should execute some plan together.

Stapp (1978) has provided some guiding principles to help in achieving environmental awareness.

- The environment should be considered in its totality. It's all aspects including natural, political, social, ecological, technological and aesthetic must be taken into account.
- Environment education should be a lifelong process. It should begin at preprimary level and continue through all formal and non-formal stages of education.
- It should be truly interdisciplinary, based on the principles of all the disciplines and taking a deistic view.
- It should incorporate active participation of children in the prevailing environment and finding out the solutions.
- Environment education should provide a chance to plan their learning encounters, taking decision and finally accepting their consequences.
- It should focus on current and potential environmental situations.

NOTES

- It should consider and promote interrelationship of people and the environment.
- Environment education should analyse the problem from local, regional, national and international point of view to help see various viewpoints and receive insight deep into it.
- It should emphasize the multi-dimensionality of the problem and their interrelationship to develop critical thinking.
- Environment education should use various kinds of learning environment and educational approaches to show environmental problems, practical encounters and firsthand experience.

Very few programmes do really integrate the environment in the curricula, pay attention to experimentation and meet the needs of the children. These are all necessary ingredients for an environment education programme. For this to achieve, one would need to adapt the content and methods of education more loosely and also show more flexibility for the natural, cultural and human environment in which education is provided. What is needed is the appropriate mixture of awareness programme, exposure to real life, and conservation and developmental programme. Different kinds of the programmes are needed at primary, lower, secondary and tertiary adult level.

At the primary level, environmental awareness is most important where development is of little use. As one goes to higher stages of education, environment awareness becomes less important and other components gain more importance. Finally, at tertiary and adult education level development is the most important aspect of environment education.

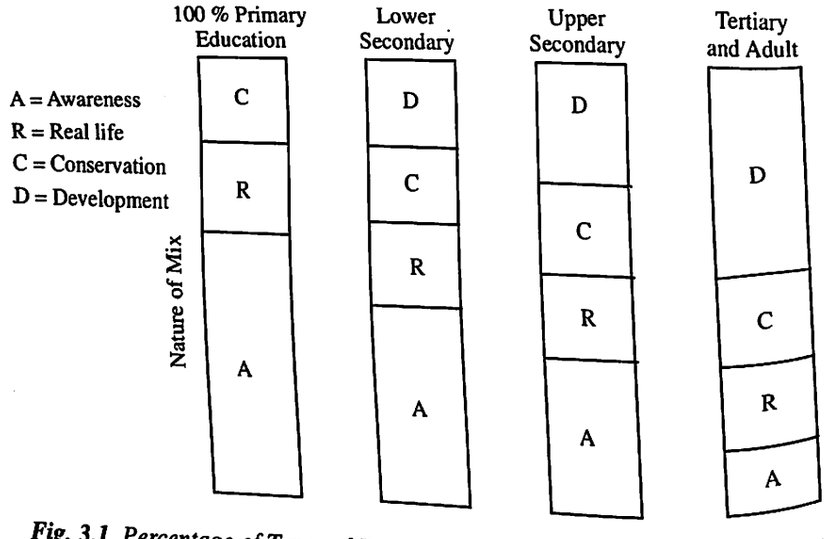



*Fig. 3.1 Percentage of Types of Environment Education at Various Stages of Education*

Another way of looking at different aspects of environment education, i.e., environment sensitivity, factual knowledge, problem solving skills and planet earth philosophy with varying emphasis can be shown. Factual knowledge which is closely related to environmental awareness is very important in the early years of education. Their importance decreases with increases in the years of education.





NOTES

### 3.4.3 Attitudinal Changes and Environmental Education

The primary objective of environmental education is to bring about a change in the attitude of the students.

According to Anastasi, 'An attitude is often defined as tendency to react favourably or unfavourably towards a designed class of stimuli, such as a national or a racial group, a custom or an institution.'

Positive environmental attitude implies,

- Awareness
- Cleanliness in actions
- Conservation
- Promoting environment

#### Programmes for Environmental Education

Following are the important programmes:

1. **School environment:** Many researches are carried on studying the effect of school environment on environmental awareness, values development, attitude changes and personality, and it is found that if a school provides a clean, hygienic, comfortable, emotional, social and creative environment, it will affect positively on awareness, value, attitude, creativity and interest of a child. This can be possible if the school provides:
   - Proper location
   - Building condition
   - Ventilation
   - Sanitation
   - Water supply
   - Cleanliness
   - Classroom
   - Facilities
   - Recreational programmes

   All these things provided in a proper and adequate form leave a positive effect on the child's personality and mind. A cooperative, emotional, integrated, organized and planned environment is provided to the students. They learn humanity for animals and plant life, and cooperative attitude towards solving environmental problems. He can learn to plan scientifically and solve critically. Therefore a cooperative, scientific, emotional, social positive attitude is developed.
2. **Presentation of curriculum:** The curriculum is pre-decided for a specific age group but it makes a significant effect on students if it is presented well.
   - Topic should be presented with teaching aids to make them interesting and more informative.
   - Different teaching methods and strategies should be decided for different topics.
   - Arrangement of the topics in class must be simpler to difficult.
   - Subject material is provided according to the need of students fulfilling the objectives.
   - Creative assignments, projects and interesting experiments must be planned.

NOTES

3. **Co-curricular activities:** In a monotonous schedule of classes, co-curricular activities play a role as a thirsty man finds a glass of water. Activities like tours, excursions, picnics, visits to zoos, gardens, movies, exhibitions, debate, essay, poem writing, slogan, poster, drawing competitions, etc., develop creativity, interest and attitude towards the subject which is involved in it. If the exhibitions, camps, rallies and tours are arranged to study environmental problems and find out their solutions, the students participate with interest.

   A proper coordination with teachers and peer group develops positive attitude. A motivated environment encourages students and their creative thinking and problem-solving attitude increase.

4. **Integrated and interdisciplinary approach:** Environmental education is interdisciplinary thus when this subject is taught the other subjects are also integrated. The content becomes more interesting and informative.

5. **Role of mass media:** In the race of development, mass media plays an important role. The media is store of knowledge. Therefore, the knowledge given by the Internet, printed material, radio, and T.V. programmes provide indirect knowledge to the students. Such programmes based on these techniques not only increase the students' participation but also improve their attitude.

6. **Involvement of students:** The active participation of students is the main objective of environmental education. As students are active they collect, analyse and make decisions independently. This way problem-solving attitude is developed among the students.

7. **Environmental values and ethics:** Environmental ethics and values develop new life style and new development patterns.

8. **Programmes for community awareness:** Many programmes decided by Government, non-government agencies include community to change the general views and develop positive attitude.

9. **Role of teachers:** A teacher plays a very important role in building attitude of the students. Teachers are the 'builders of nation' therefore a teacher's personality, behaviour, knowledge, teaching strategies and knowledge of technology helps to develop an environment of awareness. Teacher-pupil interaction creates an enthusiastic environment and students develop interest and attitude.

In order to ensure that people make positive choices about the environmental impacts of their lifestyles, there is an urgent need to create mass scale awareness on environmental and development issues.

According to study (Schwab, 1982-83) done on 117 teachers to observe rating of the effectiveness of different methodologies. Following is the result of the analysis of responses.



*Table 3.1 Effectiveness of Different Methodologies*

| | Method | Extent of use (%) | Mean effectiveness |
|---|---|---|---|
| 1. | Teacher led discussion | 92 | 4.4 |
| 2. | Lecture | 92 | 3.9 |
| 3. | Individual projects | 87 | 4.7 |
| 4. | Demonstrations | 86 | 4.1 |
| 5. | Individual reports | 86 | 4.1 |
| 6. | Reading | 85 | 3.9 |
| 7. | Inquiry | 80 | 4.8 |
| 8. | Student led discussion | 80 | 4.3 |
| 9. | Group reports | 74 | 4.1 |
| 10. | Independent study | 68 | 4.7 |
| 11. | Cognitive skill development | 68 | 4.2 |
| 12. | Debates | 50 | 4.5 |

Many kinds of resources are being used for environment education ranging from low cost/no cost environmental material. A study (Tewkslew 1982) shows that the material prepared by the teacher in combination with commercial agencies is most popular. This is closely followed by material provided by the state education agency.

Selected results of this study are shown in Table 3.2.

*Table 3.2 Selected Results of Tewkslew's Study*

| | Material | Percentage of Use |
|---|---|---|
| 1. | Combination of commercial and teacher prepared material | 62% |
| 2. | Materials provided by the state education agency | 60% |
| 3. | Materials from various other resource agencies | 55% |
| 4. | Materials developed by teaching staff | 48% |
| 5. | Text books representing one or more disciplines | 29% |
| 6. | Text books of one discipline | 26% |
| 7. | Materials developed by the school committee | 19% |

The resources used for environment education may be classified under the following categories:

- **Resources of the locality:** The resources of the locality that establish link between community and education.
- **National organization:** Organizations such as NCC, Scouts and Guides and Railways can provide much needed information.
- **Grounds of the schools:** School ground can be developed into an important study centre with some planning and care.
- **Student's contributions:** Students' contributions are kept well and are made available for the future children.



NOTES

- **Equipments:** Equipments are necessary for making accurate observations, collecting samples, measuring and recording.
- **Printed words:** Printed words can be in the form of publicity materials, handouts, posters, charts, reports, etc.
- **Audio-visual aids:** Films, film strips, chart, tapes and tape recorder are important resources.

Study made by Schwaab (1982-83):

| | Sources | Extent of use % | Mean effectiveness |
|---|---|---|---|
| 1. | Journals and magazines | 71 | 4.9 |
| 2. | Films | 68 | 5.1 |
| 3. | Newspapers | 68 | 5.1 |
| 4. | Supplementary books | 62 | 5.0 |
| 5. | Text book | 60 | 4.5 |
| 6. | Filmstrips | 59 | 4.9 |
| 7. | Personal slides | 45 | 5.2 |
| 8. | Commercial TV | 39 | 4.9 |
| 9. | Educational TV | 35 | 4.9 |
| 10. | Audio Tapes/Records | 32 | 5.0 |
| 11. | Commercial Slides | 28 | 4.2 |

In one case (SC, 1974) the total list of all the resources is the following:

**Resources**

1. Resources of Locality: Pupils, home areas, libraries, polluted water sources, etc.
2. National Organization: Telephone, directories, Bulletin of E.E., Environment Magazine,
3. The grounds of the school
4. Students contribution
5. Equipment
   - Monitoring, measuring and sampling apparatus
   - Recording equipment
6. Printed words
   - Publicity handouts
   - Statement of policy
   - Poster and charts
   - Catalogues of literature and visual aids
   - Government publication
   - Annual reports
   - Periodicals
   - Books
7. Visual aids
8. TV and Radio





## Check Your Progress

6. Fill in the blanks.
   (a) The curriculum is pre-decided for a specific age group but it makes a significant effect on students if it is _____ well.
   (b) School ground can be developed into an important _____ centre with some planning and care.
7. State whether True or False.
   (a) Basic education provides sense of responsibility and social sense.
   (b) Mass media is the quickest source of creating mass scale awareness.

## ACTIVITY

Prepare a report on the major causes of environmental degradation in your state.

## Did You Know

The Disaster Management Act was enacted by the Government of India in December 2005 which envisaged the creation of the National Disaster Management Authority (NDMA) to lead and execute a holistic and integrated approach to Disaster Management in India.

## 3.5 SUMMARY

In this unit, you have learnt that:

- Environmental degradation means overall lowering of environmental qualities because of adverse changes brought in by human activities in the basic structure of the components of the environment to such an extent that these adverse changes affect adversely all biological communities in general and human society in particular.
- Environmental pollution is taking place due to slow and gradual human activities, e.g., increase in human population, establishment of factories and industries, development of transportation facilities, etc. Environment pollution degrades the quality of the environment which can be protected by proper environmental management and assessment.
- With the socio-economic, scientific and technological development, serious problems of environmental degradation have emerged.
- Some steps taken for prevention of environmental degradation are:
- Rehabilitation of degraded land.

NOTES

- Change in institutional arrangements.
- Reforestation programs.
- Thought for renewable energy resources.
- Creating mass awareness.
- Setting of environmental issues in syllabus.
- Feedback mechanism for different regions.
- Role of state Government in building up the laws and rules for conservation
- Agenda 21 takes into account all areas/subjects with bearing on global environment. It also covers different areas which could be employed to promote environmentally sound development policies. Some of the subjects are poverty, consumption patterns, demographic dynamics, deforestation, desertification, etc.
- The events caused by natural processes on human activities are called extreme events. These disturb and degrade natural environment causing disaster for the human society. For example, floods, droughts, cyclone, heavy rains, volcano and earthquakes make adjustment difficult for human beings and loss of property and lives is caused.
- When the discharged residuals spoil the ambient environmental quality, it causes changes in the flow of environmental services and the uses man makes of the environment.
- Agents which pollute the environment may arise from several sources and exposure to them can take place through different methods. Earthquake is an event in nature that causes injury or destroys property. Landslides or flooding disasters are closely linked to rapid and unchecked urbanization that forces low-income families to settle on steep hillsides or ravines or along the banks of flood prone rivers.
- Millions of people in the developing world are on a regular basis exposed to extremely harmful indoor emissions, which are considered to lead to persistent lung diseases and cancer.
- Man is the product of his social as well as his physical environment. In time of disaster, these strong bonds manifest themselves and take precedence over his ordinary behaviour. Social response to natural and man-induced disasters is generally in positive direction.
- Some scholars use environmental awareness and environmental education interchangeably. However, there is a great difference between these two terms. Environmental education is a comprehensive concept and it includes environmental awareness also.
- To increase the people's awareness towards the importance of environmental protection, and to enable them to participate in the efforts of environmental conservation, the Government must implement environmental education and awareness programmes.
- Human beings have reached a stage where they are no longer content merely to respond to the environment. They now seek to adapt the environment to their own needs. Since conscious purposes govern the continually expanding area of human activity, any change in social objectives is invariably accompanied by a change in the system of education.





NOTES

- Basic education is the concept formulated by Gandhi. It treats the child as a member of a co-operative group. The school is recognized as a community which offers the most suitable atmosphere for training in citizenship.
- Formal education is the most effective means that society possesses for confronting the challenges of the future. Global and local environmental issues are becoming severe year by year, which are considered to be attributed by climatic changes and human activities.
- The fundamental strategy for developing non-formal environmental education is to integrate explicitly into the ever-widening range of out-of-school education programmes already available. In recent years, non-formal education programmes and institutions for carrying them out have increased in number.
- India is presently facing environmental problems of enormous magnitude that adversely affect the lives of its people from all walks of life. Many of these problems have resulted due to a lack of understanding and concern about environmental and sustainable development issues.
- The National Policy on Education (NPE) 1968 has envisaged the protection of the environment as the core element of education at all levels. The policy has also recommended the creation of environmental consciousness among all ages starting with school education.
- The Department of Science and Mathematics, on behalf of the NCERT also undertook a UNESCO sponsored case study on environmental education in India. This opportunity provided insight into the present states of environment education concepts and training at the school level, higher education and technical education levels.
- Due to inaccurate or insufficient information there is still a considerable lack of awareness of the interrelated nature of all human activities and environment. There is a need to increase public sensibility about the environment and development problems and involvement in their solutions and for a sense of personal environment responsibility and greater motivation and commitment towards sustainable development.
- Many researches are carried on studying the effect of school environment on environmental awareness, values development, attitude changes and personality, and it is found that if a school provides a clean, hygienic, comfortable, emotional, social and creative environment, it will affect positively on awareness, value, attitude, creativity and interest of a child.
- In a monotonous schedule of classes, co-curricular activities play a role as a thirsty man finds a glass of water. Activities like tours, excursions, picnics, visits to zoos, gardens, movies, exhibitions, debate, essay, poem writing, slogan, poster, drawing competitions, etc., develop creativity, interest and attitude towards the subject which is involved in it.

## 3.6 KEY TERMS

- **Environmental degradation:** It means overall lowering of environmental qualities because of adverse changes brought in by human activities in the basic structure of the components of the environment.

NOTES

- **Environmental stress:** Environmental stress occurs when lives and property are affected by sudden natural hazards.
- **Vaccination:** Immunization with a vaccine in order to protect against a particular disease.
- **Environmental awareness:** It implies the knowledge and understanding of the issues relating to changes in the environment.

## 3.7 ANSWERSTO 'CHECK YOUR PROGRESS'

1. Some major factors responsible for environmental degradation are:
   - Deforestation, i.e., excessive cutting of trees and forests
   - Overpopulation
   - Pollution of air, water, soil and marine
   - Depletion of ozone layer
   - Global warming
2. Some of the steps that can be taken to prevent environmental degradation are:
   - Rehabilitation of degraded land
   - Change in institutional arrangements
   - Reforestation programs
   - Thought for renewable energy resources
   - Creating mass awareness
   - Setting of environmental issues in syllabus
   - Feedback mechanism for different regions
   - Role of state Government in building up the laws and rules for conservation
   - Transformation of science and technology knowledge
3. The Environmental Management Plan (EMP) includes the following steps to maintain the quality of environment
   (i) Safeguard and prevent the adverse environmental impacts
   (ii) Plans for dealing with accidents and disasters
   (iii) Plans for rehabilitation
   (iv) Monitoring and feedback mechanisms on the implementations of necessary safeguards
4. (a) Environmental degradation
   (b) Pollution
   (c) Urbanization
   (d) Deforestation
5. (a) True
   (b) False
   (c) True
   (d) False
6. (a) presented
   (b) study
7. (a) True
   (b) True





NOTES

## 3.8 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. State the causes of environmental degradation.
2. What do you mean by deforestation?
3. What is the significance of non-formal education for environmental education?
4. What are the essentials of school environment to bring about attitudinal change?

### Long-Answer Questions

1. How is environmental degradation different from environmental pollution? Give steps for the prevention of environmental degradation.
2. Prepare a list of major non-governmental organizations in your region that are spreading environmental awareness among the masses.
3. Explain the different types of man-made disasters.
4. Describe the role of mass media in expanding environmental awareness.
5. Discuss the role of environmental awareness in environmental education.

## 3.9 FURTHER READING

Bell, D.; *The Coming of Past Industrial Society*, Arnold Heinman Publication, N. Delhi, 1974.

Bhatia, S.C (ed).; *Papers in Environmental Education*, IUACE, N. Delhi, 1984.

Carson, R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

Chakraborty, S.C. (ed); *Value Orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Grossland, R.W., & Moor, S.F.D.; *Environmental Studies Project: An Evaluation Report,* Macmillan, London, 1974.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.

NOTES

# UNIT 4 APPROACHES FOR ENVIRONMENTAL EDUCATION

**Structure**

4.0 Introduction
4.1 Unit Objectives
4.2 Curriculum for Environmental Education
  4.2.1 Stage Specific Curriculum
4.3 Inter and Intra-Disciplinary Approaches
  4.3.1 Multidisciplinary Approach (Infusion)
  4.3.2 Interdisciplinary Approach (Insertion)
4.4 Topical Units and Integrated Units
  4.4.1 NCERT Approach to Teaching Environmental Education
4.5 Models—Infusion and Infused
4.6 Summary
4.7 Key Terms
4.8 Answers to 'Check Your Progress'
4.9 Questions and Exercises
4.10 Further Reading

## 4.0 INTRODUCTION

Environmental Education is holistic in nature. It has an idealistic approach which endeavours to change minds, promote greater awareness, greater understanding and critical reflections on the values of individuals about environmental issues and its dimensions.

The term curriculum comes from the Latin word 'Currere' which means 'to run', the course of the study. With time it came to mean the course of study. Thus, curriculum is a course of study or training leading to a product or education.

In this unit, you will study about the curriculum, the different approaches and models for environmental education.

## 4.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the need for curriculum development in education
- Describe the stages of curriculum development
- Summarize the two approaches for environmental education
- Recall topical and integrated units
- State the two models—infused and infusion

NOTES

## 4.2 CURRICULUM FOR ENVIRONMENTAL EDUCATION

Agenda 21, the action plan of the United Nations on sustainable development, states 'Education, including formal education, public awareness and training should be recognized as a process by which human beings and societies can reach their fullest potential. Education is critical for promoting sustainable development and improving the capacity of the people to address environment and development issues. It is widely accepted that ***Education*** is the most effective means that society possesses for tomorrow. Education is humanity's best hope and most effective means in the quest to achieve Sustainable Development' (UNESCO, 1997).

Realizing *Education* as a potential instrument of social change, the National Policy on education, 1986 made Environmental Education a part of the general education at all levels, in particular at the school level. The significance and urgency of creating environmental awareness in school children has also been upheld by the Supreme Court through its directive to the Central and State educational authorities to make EE compulsory at the school and collegiate levels. (Hon'ble Supreme Court Directive - 2003).

One of the major concerns of this millennium is taking good care of the environment which nurtures all of us. We have now been living in a situation where environmental degradation is occurring at an unprecedented pace. Hence, the immediate need of the day is to bring about an awareness of the environment and its problems at all levels. Sincere efforts are needed to re-establish our links with the environment. We must protect the environment from 'ourselves'. It is our own life style, greed, selfishness and lack of awareness that is the starting point of all the problems related to the environment. The great scientist Albert Einstein said 'you cannot solve a problem with the same mind-set which created it at the first place'.

An important challenge before us at present is to infuse in to the learning process, a spirit of question. In this process, environment becomes a medium for engaging young minds in the excitement of first-hand observation of nature and understanding the patterns and processes in the natural and social worlds.

Recognizing the central role of education in environmental protection and preservation, the National Policy on Education (NPE) states that, 'There is a paramount need to create a consciousness of the Environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should inform teaching in schools and colleges. This aspect will be integrated in the entire educational process' (NPE, 1986).

The NPE, 1986 and the subsequent educational policies have positioned environmental awareness and education firmly in school education. The National Curriculum Framework (NCF) 2005 recognizes the critical role of the environment as the context in children's learning by emphasizing that 'Learning takes place through interactions with the environment around, nature, things and people, both through actions and through language. The physical activity of moving, exploring and doing things, on one's own, with one's peers or in the company of adults, and using language—to read, to express or ask, to listen and to interact—are the key processes through with learning occurs. The context in which learning takes place is thus of direct cognitive significance for meaningful learning' (NCF 2005).





NOTES

EE aims at bringing awareness about the relationship between human beings and environment and the environmental problems/issues we are facing today because of our negative impact. It also provides the basic knowledge about how indigenous tradition and cultural practices are related to the environment. It inculcates habits, values, emotions and attitudes required to maintain and promote quality environment for the survival of mankind. EE aims at developing a sense of responsibility and eagerness to ensure appropriate actions to solve environmental problems. It aims at bringing about a change or transformation in the cognitive, affective and psychomotor behaviours of children. It is an action-oriented, project centred, and participatory process. It enables the development of self-confidence, positive attitudes and personal commitment towards environmental protection and improvement of the environment.

### Significance of Environmental Education in Schools

EE in the education is visualized as an integrated subject area which draws upon insights from sciences (physical, chemical and biological), social studies (history, geography, civics, etc) and environmental education (protection and conservation). The approach in EE goes beyond single subject approach and helps children to use the contents and methods of science and social sciences and environment to solve environmental problems/ issues in future.

One of the main focuses of EE is to expose children to the actual world they live in. The learning situations/experiences of EE help children to explore and connect with their natural and man-made surroundings. EE helps children to develop their own insights into the functioning of several things or understanding human processes in the environment. Such interactions with their surrounding environment are immensely important in the healthy development of children. Such interactions also enhance the learning capabilities of children by providing concrete learning experiences. The concept of local specificity with global thinking is the key to Environment Education. Think globally and act locally is a well known phrase in EE.

Schools should become a demonstration of the environmental values that the education system is trying to convey. The schools need to exemplify good environmental practices and should communicate these to not only students, but also to the community at large. A comprehensive support system both within and outside the school system needs to be developed. This would involve various components with inputs from academicians, intellectuals and the society outside the school system. It would also involve media, networking with different media groups, institutes, NGOs, and other organizations.

Environmental Education with the inherent values of environment and its conservation is just not a subject area alone. It is a process leading to transformation of behaviours and a way of life. It focuses on all the three domains of learning –cognitive, affective and behaviours/actions in a graded manner.

Thus, the scope of EE at the school level may be summarized as enabling children to:

- Connect with their natural and man-made environment understanding our dependence on the various components of environment (biotic, abiotic and man-made)
- Develop a holistic understanding of their environment
- Develop a multidisciplinary perspective to understanding of our environmental issues/ problems and appreciate the impact/s of our daily activities on its integrity

NOTES

- Develop favourable attitudes and habits to protect and preserve our environment

A careful reflection on the above objectives would reveal that they are centred on developing in children curiosity and awareness about their surroundings, knowledge and understanding of their environment and their relationships or connections, appreciation, values and attitudes, skills of observation and measurement, collection of information and its processing, creative expression, etc.

Schools play a critical role in supporting and helping children explore their environment and construct their own meaning from their interactions/experiences. By structuring and organizing learning experiences for children to explore, understand and express their experiences, EE in the primary stage contributes to development of conceptual understanding, attitudes and values, skills and habits/practices relating to a range of subjects at the primary, secondary and higher secondary level. Such learning experiences also introduce students to some of the hidden benefits such as development of appreciation and respect for nature and natural resources, diversity that exits in the environment, ability to express feelings and thoughts, etc.

### 4.2.1 Stage Specific Curriculum

The National Curriculum Framework (NCF) 2005, has prepared a fresh curriculum of environmental education for different class levels. The design is based on the feedback collected from school textbooks of different states. NCF structured the framework on the basis of the following:

- Achievement of educational goals in the schools
- Role of environmental education in achieving the goals
- Organization of environmental education experiences
- Evaluation

For effective teaching of environmental education following objectives related to knowledge, skill, and attitudes are essential:

**Knowledge**

To develop a sense and awareness of environmental issues the following objectives were taken into consideration:

- Natural environment
- Impact of human activities on the environment
- Comparison of past with present scenario of environment
- Environmental issues such as: (i) The greenhouse effect (ii) Acid rain and (iii) Air pollution
- Legislative provisions, Acts and regulations for dealing with environmental issues
- Formation of policies and framework for the environment
- Interdependence of Human life and environment
- Political Conflicts and issues arising from the use and misuse of natural resources
- Effectively implementing the laws made to govern the environment





NOTES

**Skills**

Skills recognized to teach have been identified as:

- Communication skills
- Observation skills
- Analytical skills
- Problem solving skills
- Interaction skills
- Social skills and information technology skills

**Attitudes**

There is a need to promote a positive attitude towards the environment:

- Appreciation of care and concern for the environment
- Concern for other living beings on earth
- One's thoughts and views on the environmental issues
- Respect for others opinion
- Respect for rational argument and evidence

Going through the above objectives, the integrated course content was framed for different stages which is detailed below:

**Primary Stage**

The concepts covered in this framework are as follows:

- Familiarization with one's own body
- Awareness about immediate surroundings
- Need for food, water, air, shelter, clothing and recreation
- Importance of trees and plants
- Familiarization with local birds, animals and other objects
- Interdependence of living and non-living things
- Importance of cleanliness and sanitation
- Importance of celebration of festivals and occasion of national importance like Independence Day
- Awareness of sunlight, rain and wind
- Caring for pet animals
- Awareness about air, water, soil and noise pollution
- Need for protection of the environment
- Knowledge about the various sources of energy
- Importance of conservation of water resources and forests
- Indigenous and traditional knowledge about the protection of the environment

NOTES

### Upper Primary Stage

The major concepts covered at this stage are:

- Adaptation of living beings to the environment
- Natural resources
- Water cycle
- Food chain
- Importance of plants and trees in keeping the environment clean
- Classification of plants
- Role of plants and animals in environmental balance and soil conservation
- Ecosystems
- Necessity of clean air for healthy living
- Animals and their characteristics
- Effects of environmental pollution and the consequences of air pollution-(i) Greenhouse effect, (ii) Ozone layer depletion and, (iii) increase in carbon dioxide
- Role of microorganisms in the environment
- Dependence of the community on the environment
- Basic knowledge about the earth and its atmosphere
- Physical features of the country
- Population and environment
- Care and protection of livestock
- Necessity of wildlife protection
- Impact of deforestation
- Impact of industrialization on the environment
- Role of civic society in protection of the environment, personal and public property including monuments

### Secondary Stage

The concepts of environmental education have been provided in the curriculum framework in the states of Rajasthan and Madhya Pradesh. The environmental concepts are taught both at the concrete and abstract levels. The concepts covered are:

- Biosphere
- Greenhouse effect
- Ozone layer depletion
- Use of fertilizers and pesticides
- Wildlife protection
- Composition of Soil
- Management of domestic and industrial waste
- Pollution of noise, air, water and soil and control measures
- Ecosystem
- Management of non-degradable substances
- Edible and ornamental plants





NOTES

- Sewage disposal and cleaning of rivers
- Nuclear energy
- Radiation hazards
- Gas leak
- Wind power
- Bio-energy
- Environmental laws and acts
- Environmental concepts also extend to subject areas like languages and social sciences, which reinforce learning and internalization of all such concepts

### Higher Secondary Stage

This is the stage of diversified students where two streams are found: academic stream or the vocational stream. Majority of the concepts are found integrated with the subjects like biology, chemistry and geography. Students opt for any one of these subjects.

The coverage of environmental education concepts in the textbooks of various subjects includes:

- Environment and sustainable development
- Pollution of the Atmosphere like global warming
- Greenhouse effect
- Acid rain
- Ozone layer depletion
- Water pollution- international standards of drinking water
- Importance of dissolved oxygen in water
- Bio-chemical oxygen demand
- Chemical oxygen demand
- Land pollution
- Pesticides
- Ecology

Along with these concepts, some co-curricular activities are also required to enhance the practical knowledge and skills. The approaches which can be applied in the teaching/ learning process can be summed up as the following:

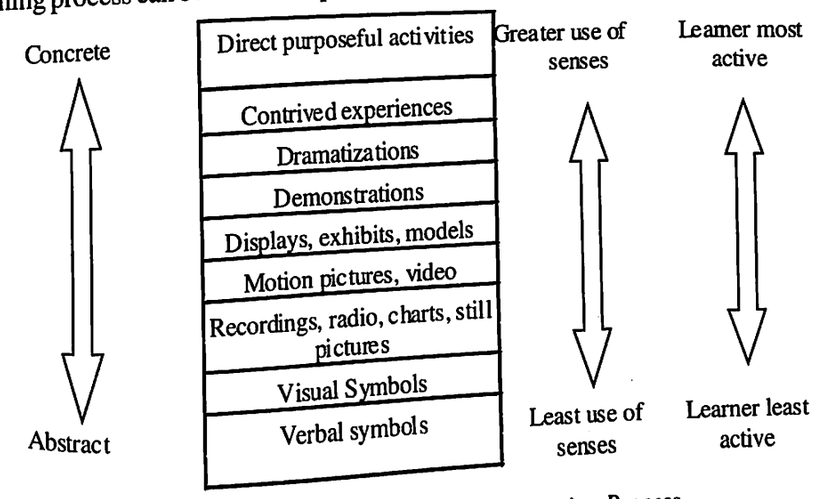



*Fig. 4.1 Approaches for Teaching/Learning Process*

## ACTIVITY

Conduct a survey among the students of fourth and fifth classes and find out about their knowledge of environmental education.

## CHECK YOUR PROGRESS

1. What are the aims of environmental education?
2. What is the scope of environmental education at the school level?

## 4.3 INTER AND INTRA-DISCIPLINARY APPROACHES

The first international environmental conference at Stockholm in 1972 made some decisions about environmental education. It was felt that to solve the problems created by man's activity within the environment, environment oriented education is required. In India in the five-year plan the relationship between ecology and development was recognized. In this plan it was stated that 'The physical environment system is a dynamic, complex and inter-connected system in which any action in the first part affects the other parts. There is also the interdependence of living beings and their relationship with land, water, air, and planning for harmonious development which recognizes this unity of nature and man.'

In 1981, NCERT felt that environmental education must be an integral part of education from the early stages.

In 1986, the National policy on education felt the importance and need of environmental education. It was expressed as, 'There is a paramount need to create consciousness about the environment. It must permeate all edges and all sections of the society, beginning with the environmental consciousness inculcated in the child by teaching in schools and colleges. This aspect should be integrated in the entire educational process.'

The international environmental educational workshop held in Belgrade diverted attention towards environmental values and attitude by making environmental education an integral part of the curriculum.

According to the national curriculum for Elementary and Secondary Education; Framework 1988, presented the NCERT's view 'School curriculum should highlight the measures for protection and care of the environment, prevention of pollution, and conservation of energy.'

After keeping these points in mind, it was decided to keep environmental education as a separate subject and other related topics to be integrated with subjects like science and social science in the higher classes.

The National Curriculum Framework for School Education (NCFSE), 2000 also felt the need of teaching environmental studies in the various stages of schooling. The fundamental duties (Article 51 A) of Part IV A of the Indian Constitution, promotes protection and improvement of the national environment including forests, lakes, rivers, wildlife and to have compassion for living creatures. 'Further, it mentions the general objectives as, 'understanding the environment in its entirety both natural and social, and its interactive processes, the environmental problems and the ways and means to preserve the environment.'

Therefore, the environmental concerns, issues and environmental basics were included in the curriculum taught in the schools.

| Class | Subjects |
|---|---|
| I and II | 1. Healthy and productive living |
| | 2. Language and Mathematics |
| | 3. Environmental Concerns |
| | |
| III – V | 1. Environmental Studies as a separate subject. |
| | |
| VI – X | 1. Social Science |
| | 2. Language |
| | 3. Science and Technology |
| | 4. Environmental Studies |
| | |
| XII | 1. Integrated with other subjects with topics related to Environment |
| | 2. Conservation |
| | 3. Disaster Management |
| | |
| College Level | |
| (Vocational Courses) | 1. Environmental Education |
| | 2. Rural Development as general foundation Course |

Thus, a value based, action oriented course of environmental education is needed to:

- Acquaint students with the environment related issues and problems.
- Understand the problems, analyse, evaluate, draw inferences and equip themselves to resolve them.

In order to achieve the above mentioned objectives curriculum must focus on the following aspects:

- Learning about the environment
- Learning through the environment—exploring various activities
- Learning for the environment—developing sensitivity towards the environment, its protection and preservation.

To fulfill the above objectives, the curriculum must be designed in such a way that it not only provides knowledge but more importantly develops awareness, attitudes, values and skills by participating in activities, at all levels of school education both inside and outside the classroom.

### 4.3.1 Multidisciplinary Approach (Infusion)

Infusion means the component of environmental education (EE) is instilled into the various existing disciplines like Biology, Chemistry, Physics, Geography, Economics, Political Science, English and Hindi.

NOTES

- In this approach, the content and skills are integrated into the existing course so as to focus on that content without losing the integrity of the course itself. Here, the emphasis is not given on the knowledge of content but on spread of awareness
- Attitude and skills
- Leading to actions

A combination of content and process (including projects and activities) is used to achieve the goals.

The major concerns and the environmental issues which are required to be addressed through the curriculum at different levels are:

- Concept and meaning of environment
- Components of environment
- Natural Resources
- Pollution and related problems
- Current environmental concerns and interdependence between man and nature.
- Energy Management
- Toxicology
- Health Hazards
- Agricultural Environment
- Ecology or Ecosystem
- Bio technology and environment
- Sustainable development
- Population and development
- Quality of life
- Environmental policies and provisions

At the national level, this has been emphasized in the context of different disciplines (NCERT), 1988.

### 1. Science

The views of NCERT to integrate environmental issues and concerns with the science subject is explained as—'there are three aspects of the study of physical and natural environment under the education of science.

- The pupil has to learn about the flora and fauna, natural resources, sources of energy, etc.
- Knowledge acquired through the physical and natural environment of the learner.
- Learning should be aimed at the development of a genuine concern, sensitivity and the ability necessary for the preservation and protection of physical and natural resources.'

'National Curriculum Framework for School Education (NCFSE), 2000, states that the school curriculum should therefore, help, to generate, to promote among the learners understanding of the environment in its totality, both social and natural and its interactive processes, the environmental problems and the ways and means to preserve the environment.'

According to guidelines given by NCERT 2001:





NOTES

**Primary Stage:** The science subject is included in the curriculum to make a child—

- Realize the beauty and arouse interest in the environment
- Develop aesthetic values and the ability to express them in different art forms
- Give respect, show concern towards mankind and the environment
- Coverage of topics is related to the child's surroundings, health and hygiene, field activities and observations
- Make the student physically, emotionally, and mentally healthy
- Function effectively as a member of the several groups (family, community) one belongs to
- Develop skills, attitude and values for improving the quality of the student as well as that of the community
- Realize the need to live in harmony with nature

The learning outcomes as defined by Delores' Report are:

**Learning to get knowledge**

- Understand the structure and functions of human body
- Understanding of social, cultural, natural, manmade environment and their relationship
- Develop awareness about the need to conserve the surroundings and keep it neat and clean
- Conservation of natural resources, their protection and the ability to properly use the resources

**Learning to acquire skills**

- Develop skills of observation, reporting, collecting information, discrimination, and classification, experimentation, making predictions, estimations and drawing inferences
- Practicing healthy habits such as cleanliness, discipline, punctuality, proper care of belongings
- Develop skills of reading and drawing maps, use of globes and use of standard and non-standard units of measurement

**Learning to live together**

- Develop social skills, spirit of tolerance, team spirit, cooperation, unity and integrity
- To live together with people and with the surrounding environment in faith and harmony
- To respect the rules and laws of the various communities and abide by them

**The child will**

- Understand the role of the individual at home, school and in community
- Indulge in creative activities
- Acquire self-learning habits and discuss about the surrounding environment
- Develop values like truthfulness, honesty, brotherhood and patriotism

- Develop aesthetic values, interest in environment, culture and traditions and express them by actions of respect
- Develop scientific temper in day-to-day life

**Upper Primary Stage:** As technology is increasingly influencing our lives; NCERT 2000 has recommended Science and Technology as a part of the curriculum to be taught at the upper primary stage. The main objectives are to provide:

- Promotion of scientific and technological literacy among learners
- Understanding the nature of science, scientific principles and laws relating to technology
- Values, joint enterprises of science, technology and society
- Development of manipulative skills
- Skill of handling equipments and experiments
- Awareness of the immediate environment
- Realize the need of protecting and conserving the natural resources
- Knowledge of renewable and non renewable sources, pollution, disasters, recycling and a lookout for alternative sources
- Development of skills to prepare assignments, field reports, projects, charts and models
- Opportunities to make a child self-sufficient and capable of solving problems
- Knowledge of the life process of human beings and dependence on nature, the natural cycle, diseases, nutrition and health

## 2. Social Science

The infusion of environmental concepts in social science has some objectives which are:

- To develop an understanding of the natural and human resources and their protection for further use.
- Develop a positive attitude towards conservation and preservation of the environment.
- Realize the importance of resources and the cultural heritage.
- Develop skills to collect different environmental data (rain, water, soil, petroleum, and air), their relation with human beings, presenting data in tables, graphs and drawing conclusions.
- Develop skills to prepare projects, assignments on the social, political and geographical environment.

### Secondary Stage

**Science and Technology:** Develop an understanding of the various processes of the environment and concern for its conservation and preservation.

### Senior Secondary Stage

**Geography:** Understanding and analysing the interrelationship between the physical and human environments and their impact on each other.





**Chemistry:** To equip students to face various challenges related to health, nutrition, environment, population, weather, industries and agriculture.

**Biology:** Encourage rationale/scientific attitude to issues related to population, environment and development, enhance awareness about environmental issues, problems and the appropriate solutions, develop appropriate environmental ethics and values.

**Economics:** To encourage and enhance knowledge about population control and statistics of census, and to promote knowledge regarding graphs and analysing data regarding national issues.

Infusion is visible at the elementary level but becomes less towards the Secondary and Higher Secondary level where classes are departmentalized and topically related.

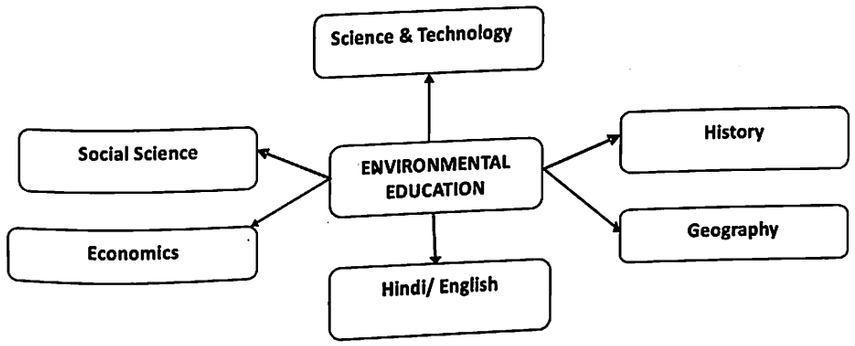



*Fig 4.2 Multidisciplinary Approach Model*

## Environmental Education Curriculum (Topical Units)

### Social Science

The topics taught in class I-II:

1. My Body
2. My Needs
3. My family and my home
4. My neighborhood
5. Transport and Communication
6. Natural Environment

Class III- V

Unit – Me and My Surroundings

1. My body
2. My needs
   - Food, water, air
   - Shelter
   - Clothing
   - Health and hygiene
   - Recreation
   - Community service

NOTES

3. My Surroundings
   - Natural phenomenon and resources
   - Transport and communication

**Teaching\Learning Strategies**

- Environmental visits
- Guided simple experiments
- Projects
- Individual/group activities
- Quiz/puzzles/games
- Role play/drama
- Teacher guided classroom activities

**Class VI- VIII**

**Unit- The Earth – Our Habitat**

- **Four realms of the earth:** lithosphere, hydrosphere, atmosphere and biosphere.
- **Major relief feature of the earth:** continents and oceans.
- **India on the world map:** Physiographic divisions of India – Mountains, plateaus, and plains, climate, natural vegetation and wild life and the need for their conservation.

**Project and Activity**

- Preparing charts of trees, flowers, fruits and fibres
- Making maps and showing wildlife sancturies
- Trip to zoo and wildlife sancturies

**Learning Outcomes**

Students will be able to:

- Explain the interrelationship between the different realms of the earth
- Understand major landforms of the Earth
- Comprehend broad physiographic division of India
- Describe the influence of land, climate, vegetation and wildlife on human life
- Appreciate the need for conserving natural vegetation and wildlife

**Class VII**

**Unit II: Our Environment**

- **Environment in its totality:** Natural and Human Environment
- **Natural Environment:** Land – interior of the Earth, Rocks and minerals – Earth movements and major land forms
- **Air:** Composition, structure of the atmosphere, elements of weather and climate, temperature, pressure, moisture and wind
- **Water:** Fresh and saline, distribution of major water bodies, ocean water and their circulation





NOTES

- Natural vegetation and wildlife
- Human Environment: Settlement, transport and communication
- Man - Environment interaction : Case studies – Life in the desert regions - Sahara and Ladakh, life in tropical and sub tropical regions – Amazon and Ganga – Brahmaputra, life in the temperate region – Prairies and the Veldt

**Project and Activity**

- Observations regarding the local, cultural environment, types of houses, settlement patterns, transport systems, communication methods and vegetation
- Collection of stories and the changes taking place in the surroundings
- Collect more information about the areas other than given in unit

**Unit III: India – Land and the People**

- **India:** Location, relief, structure, major physiographic units, rocks and minerals, soils, their distribution and impact on life
- **Climate:** Factors influencing the climate, monsoon – its characteristics, rainfall, temperature distribution, seasons, climate and human life
- **Drainage:** Major rivers and tributaries, lakes and seas, role of rivers in the economy, pollution of rivers, measures to control river pollution
- **Natural vegetation:** Vegetation types, distribution as well as altitudinal variation. Need for conservation and various measures of conservation
- **Wildlife:** Major species, their distribution, need for conservation and various measures to protect wildlife
- **Population:** Size, distribution, age, sex composition, population change – migration as a determinant of population change, literacy, health, occupational structure, and national population policy – adolescents as an underserved population group with special needs

**Project and Activity**

- Survey and reporting of landforms, locality, and its influence on transport, communication and settlement
- Posters – Pollution of rivers, rainfall harvesting, depletion of forests, global warming and soil erosion

## Environmental Education Curriculum (Topical Units)

## Science and technology

## Course Structure Class VI

Unit 1- Our Earth

- Factors essential for life on earth
- Structure of the earth- its crust, mantle and core
- Atmosphere, oceans, water and soil
- The Earth and Solar system
- Uniqueness of the planet earth

NOTES

Unit 2- Our Environment

- Physical and biological environment
- Biotic and Abiotic components
- Biotic components- plants and animals
- Abiotic components- light, temperature, air, water, soil
- Interaction between biotic and abiotic components
- Socio-cultural environment

**Course Structure Class VII**

Unit 1- Life on Earth

- Role of man in the conservation, maintenance and judicious use of resources with reference to forests, soil, minerals, water and air

Unit 2- Water

- Water Pollution- cause and prevention

**Course Structure Class VIII**

Unit 3

- Soil pollution, soil erosion and prevention
- Air pollution- causes and prevention
- Green house effect, acid rain

**Course Structure Class IX & X (infused in Social Sciences)**

- Climate and human life
- Measures to control river pollution
- Wildlife- major species and their distribution, need for conservation and various measures
- Population

**Class X**

Unit 4

- Degradation and conservation of natural resources
- Forest and wildlife, conservation and protection of forest and wildlife
- Need for conservation of water resources and checking pollution
- Industrial pollution and degradation of the environment, measures to control degradation

**Course Structure Class IX & X (infused in Science & Technology)**

**Class IX**

Unit 5- Environment

- Habitat and adaptation
- Ecosystem



**Class X**

Unit 5- Environment

- Causes, prevention and control of soil erosion, pollution of air, water, etc.
- Ecological Balance
- Environment and its development
- Environmental laws

**Environmental Education curriculum (Topical Units)**

**At Higher Secondary Stage (Class XI & XII)**

**1. Geography**

**Class XI**

- Life on Earth
- Wildlife
- Soil Conservation
- Natural Hazards

**Class XII**

- Resources and sustainable development
- Environmental pollution

**2. Economics**

**Class XI**

- Population- Environment

### 4.3.2 Interdisciplinary Approach (Insertion)

In the Insertion approach, relevant components of many disciplines are drawn to create a unit of environmental education. A course on the global or environmental issues which is developed as per the investigation skills format is an example of insertion. This approach with the teacher (educator) acting as the facilitator and advisor is more effective in developing awareness and fostering positive attitude towards environmental issues.

The present efforts to develop curricula in the area of environmental or population education indicate a trend towards interdisciplinary approach to curriculum design. These areas are challenging in the sense that they require consideration in the context of biological, sociological, historical, economic and political realities.

The interdisciplinary approach in curriculum helps in the following ways:

- Understanding the field of different subjects in a better and more realistic manner
- Solving various problems of the human society in an effective manner
- Providing awareness of key concepts and general ideas that have emerged in different subjects



NOTES

In the implementation of this type of curriculum, some problems are faced as it is totally based on skills. Therefore,

- Team teaching programmes are needed during teaching. The team teaching programme is only restricted to micro teaching and the method of teaching classes for pre service teachers.
- Trained and experienced staff is not available for some subjects.
- Lack of coordination can hinder the effectiveness of this programme.
- College and university never provides such opportunities.

If we want to live in harmony with our environment and want to utilize different areas of specialization then we have to adopt a team teaching approach. In order to achieve this goal, colleges, universities and institutions have to provide such opportunities to scientists, social scientists and trainers to plan techniques and material for the implementation of total approach.

The interdisciplinary approach supports and is based on the subject-centered pattern of the curriculum. In this type of curriculum, different subjects like history, language and mathematics are included according to the level of various stages. Economics, psychology and sociology are introduced at the secondary and senior secondary stages of schooling. The content which is considered to be included in different subjects is kept with an idea that lays emphasis on:

- Details of cultural heritage
- Cognitive functioning of the child
- Expansion of knowledge
- Internal order of subjects may be presented in a particular sequence
- Presentation in suitable units or branches.

Every discipline has a basic structure. This structure is reflected in the organization of the content and the interrelationship among its various components.

- Every discipline supplies its concepts, skills, rules as well as principles
- Subject knowledge is on priority
- Changes occur only when subject matter changes and content is reorganized
- Content and learning outcomes decide the methods of teaching
- Organization of content is based on the logic of the structure of the discipline

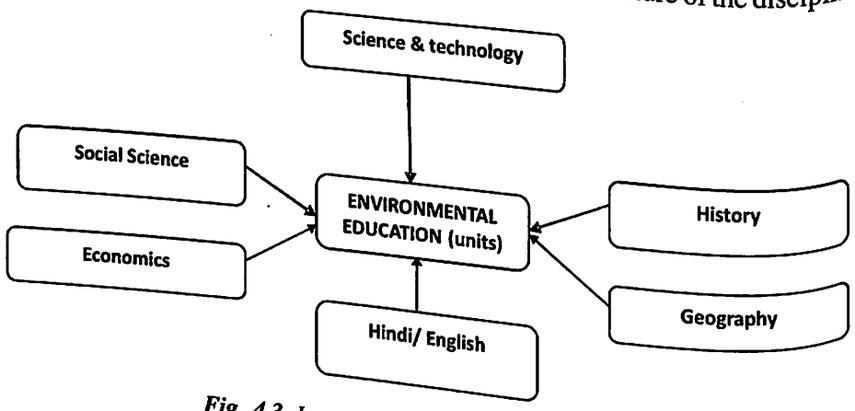



*Fig. 4.3 Interdisciplinary Approach Model*

The classroom curriculum models can be distinguished in two general categories: the topical unit model and the integrated model.



*Table 4.1 Interdisciplinary vs Multidisciplinary Approach*

| S. No | Basis | Interdisciplinary | Multidisciplinary |
|---|---|---|---|
| 1. | Implementation | Easy to implement. | Comparatively difficult to implement. |
| 2. | Teacher | No especially trained teachers are required. | More training is required to teachers to teach the content to the students. |
| 3. | Coordination | Coordination is not required as it is a single subject. | Greater coordination is required among teachers. |
| 4. | Time | Time is required to complete the course content. | Less time is required to complete the course content. |
| 5. | Curriculum load | There is an additional load on environmental education curriculum. | There is minimum load on environmental education curriculum. |
| 6 | Curriculum development | Components are easily identified and arranged in sequence. | Components can be identified and accommodated in the existing curriculum. |
| 7. | Evaluation | A comprehensive evaluation is easier to apply. | Comprehensive evaluation is difficult due to different variables. |
| 8. | Class Level | More appropriate at the secondary level rather than the elementary level. | Appropriate at all levels of classes. |
| 9. | Goals | Some goals of environmental education may be achieved at secondary and tertiary levels. | The goals of environmental education are achieved at every level. |



### Check Your Progress

3. What was the contribution of the first international environmental conference at Stockholm in 1972?
4. What are the major environmental issues which need to be addressed through the curriculum at different levels?

## 4.4 TOPICAL UNITS AND INTEGRATED UNITS

### Topical Approach

Topical arrangement means that a topic should be finished entirely at one stage. It takes the topic as a unit. Topical arrangement requires that easy and difficult portions of a topic should be dealt with at one stage only.

In this system the topic which is dealt with earlier receives no attention later and so there is every chance of being forgotten. The main defect in the topical method is that it introduces in the curriculum a large amount of irrelevant material for which the students have no time and no immediate need or the use at that particular stage. They are introduced with a view to make the teaching of the topic complete and thorough. Hence, topical method demands that a topic once taken should be finished in its entirety.

## Integrated Approach

Before knowing this approach, we have to understand conceptual approach. In activities a child gets the opportunity to touch, feel, taste, handle, smell and so on. These result in percepts..Percepts develop from impressions of awareness of sensations caused by an environmental stimulus which requires little interpretation. Percepts are primary factors in thinking which often initiate train of thought.

When percepts are recalled at some later time without the presence of the external stimuli, the memories and images are already formed. The percepts in the form of images and memories develop into greater abstractions called concepts. The concepts are usually formed as a result of many related sensations, percepts and images. For example, if a child has distinguished apple from other fruits, that means that the child has applied the word apple to a group of ideas which include the image and then the memories in the form of shape, colour, size etc. of the apple and has developed a concept. The concepts are usually organized as a result of many related sensations percepts and images.

In case of teaching Science, it is important to teach concepts and process both. For example if the concept of temperature is being taught then the child has to be taught to measure temperature using a thermometer or when a child is taught to find out weight of a body by spring balance, then it is imperative to teach the child to record weight using a spring balance or reading scale of the spring balance.

Here weight is a concept and process. Hence we use both the approaches conceptual approach and process approach together i.e. at primary level teaching through integrated approach is more effective. Conceptual Approach involves Child Centred Approach and Process Approach involves Teacher Centred Approach. Thus, using both the approaches together is Integrated Approach.

### 4.4.1 NCERT Approach to Teaching Environmental Education

A comprehensive consultation strategy was evolved by the NCERT keeping in view the paramount urgency of introducing Environmental Education (EE) as a compulsory subject in schools. The experts, environmentalists, educationists and organizations working in the field of environment and EE were approached to give their comments and suggestions on the seven specific issues identified as being critical to development of syllabus for EE.

An issue wise analysis of comments and suggestions received is given below:

**1. Scope and dimensions of environmental education at elementary, secondary and higher secondary levels of school education**

EE has generally been visualized as a multidisciplinary area of study. The scope is broad based and encompasses physical, chemical, biological, social, cultural and human dimensions of study. All the dimensions are closely interrelated and influence one another. The themes, which emerge prominently, include interdependence of man and nature, ecologically and socially sustainable development, pollution and the problems it creates and the preservation and conservation of natural resources. The other themes that find a prominent place are population, human health, impact of science and technology, industrialization, culture, ethics, agriculture and economics.





The main focus of EE is to expose students to the actual world they live in. They have to be acquainted with the environment related issues and problems. They must also be able to look at the environmental problems and concerns, analyse, evaluate, draw inferences and equip themselves to resolve them. To achieve this, the curriculum could be based on the three common aspects:

- Learning *about* the environment
- Learning *through* the environment— exploration through a variety of activities
- Learning *for* the environment by developing a genuine concern for and sensitivity towards its protection and preservation

In order to realize the above, the objectives of EE need to focus not only on knowledge but more importantly on generating awareness, developing attitudes, values and skills, and promoting participation and action among children at all levels of school education. By implication, learning opportunities would not remain limited to the classroom alone but extend much beyond it.

On the issue of viewing EE as a compulsory subject with reference to the different stages of school education, i.e., elementary, secondary and higher secondary, the common consensus on the scope and dimension at each stage, as it emerged, is as follows:

- Elementary: Coverage to be related to the child's surroundings, health and hygiene along with suitable field activities and observations
- Secondary: Moderate exposure to various environmental concepts, plant and animal life, their interaction with the environment, pollution and other problems
- Higher secondary: Greater exposure to all the topics covered at the previous levels, in addition, some other topics could also be included

**Integration of topics**, not only at the elementary level but also at the secondary and higher secondary levels could also be done. To facilitate this process, the basic inputs and ideas about the environment along with concrete examples could be given through components in the physical sciences and life sciences.

In addition to the above approaches, another view could be that of a mixed approach.

The underlying philosophy in determining the scope and dimensions of the syllabus could also be highlighted in a variety of ways. Gandhiji's concept of correlation in three spheres, i.e., *self, society* and *nature*, focuses on the *inner man.* The holistic framework focusing on 'man in nature' and education correlated to life and the total environment is to be thought of. At the same time, nature having its own value, regardless of its value to human beings, is important too.

The main purpose of EE is to acquaint and sensitize the young minds to the environmental problems and concerns, to inculcate in them healthy personal and social attitudes and behaviour towards environment. This will enable them to initiate work for its sustainability individually and collectively taking together peers and community.

**2. Significant elements of the content and process including projects and activities for EE**

EE as an interdisciplinary subject has not only to lay emphasis on content but also on the development of awareness, attitudes and skills, leading to action. The content and process including projects and activities are to be geared towards creating a sustainable world.

**Themes:** There is a nationwide commonality of perception regarding the major concerns and issues of EE. These include:

NOTES

- Concept and meaning of environment
- Components of environment
- Natural resources
- Pollution and related problems
- Current environmental concerns and interdependence between man and nature
- Energy management
- Toxicology
- Health hazards
- Agriculture and environment
- Ecology/ecosystem
- Bio-technology and environment
- Sustainable development
- Population and development and the quality of life
- Environmental policies and legal provisions

The topics suggested for inclusion in the syllabi are as given below.

- Natural resources (flora, fauna, air, water, land, minerals)
- Biological diversity
- Marine life
- Inter-dependence of man and environment
- Environmental degradation
- Environmental problems and hazards
- Environmental pollution _ air, water, soil, noise
- Waste management
- Disaster management
- Protection of human health conditions and quality of life
- Conservation of energy, soil, wildlife, forests, water
- Renewable resources
- Eco-friendly and indigenous technologies
- Water resources management
- Sustainable development
- Sustainable agriculture
- Environmentally sound management of biotechnology
- Environmental policies and programmes
- Environmental information resources
- Acts, laws and regulations
- Role of government and non-governmental agencies.

Pollution in its various aspects emerges as a very important concern and a critical area of attention. Equally prominent are the local indigenous methods and traditional practices to bring solutions and changes in the local context.

In order to make the content of EE relevant to the students' life, it should reflect local environmental concerns, problems and local specific needs and be responsive to local specific challenges.





NOTES

Considering the environmental components like (1) Real life situation (2) awareness (3) conservation and preservation of natural resources (4) sustainable development; National Curriculum Framework (2006), has suggested consideration of the following aspects in the curriculum at different stages.

**Elementary Stage:** Emphasis must be given on topics like-

- 75 per cent on building awareness
- 20 per cent on real life situation
- 5 per cent on conservation of natural resources

**Lower Secondary Stage:** The topics are arranged in such a manner that more weightage is given to real life situations than awareness.

- Real life situation
- Awareness
- Problems and their solutions

**Higher Secondary Stage:** Emphasis is on the following topics-

- Conservation
- Assimilation of knowledge
- Problem identification
- Activities and skill

## 4.5 MODELS—INFUSION AND INFUSED

Multidisciplinary and Interdisciplinary approaches symbolize the whole of environmental education curriculum framework through a range of disciplines. There is a thin line dividing the two approaches and much depends on the matter of the curriculum.

A multidisciplinary approach presents environmental matters through a range of disciplines infused in various subjects.

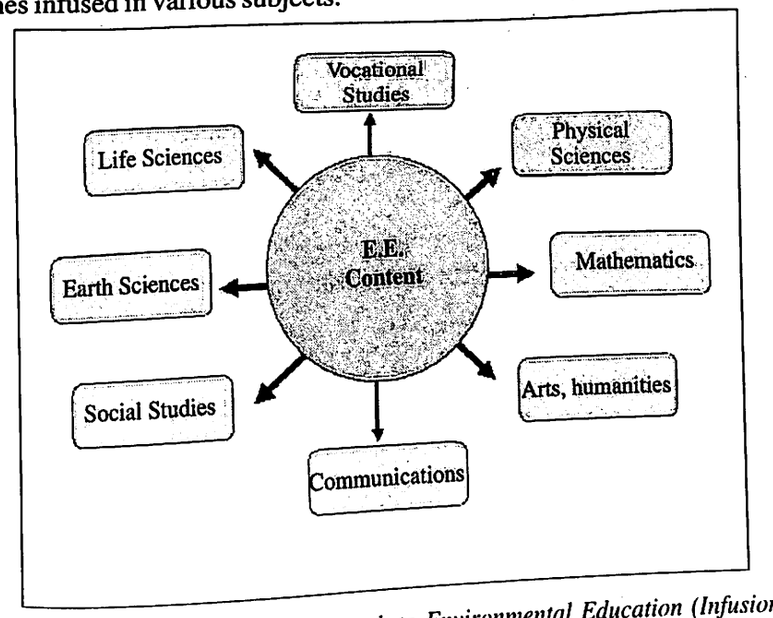



*Fig. 4.4 A Multidisciplinary Approach to Environmental Education (Infusion)*

(**Source:** Lahiri et.al., 1993;49)

NOTES

In the interdisciplinary approach the content of teaching becomes unified by using matter from various disciplines simultaneously and forming a single subject.

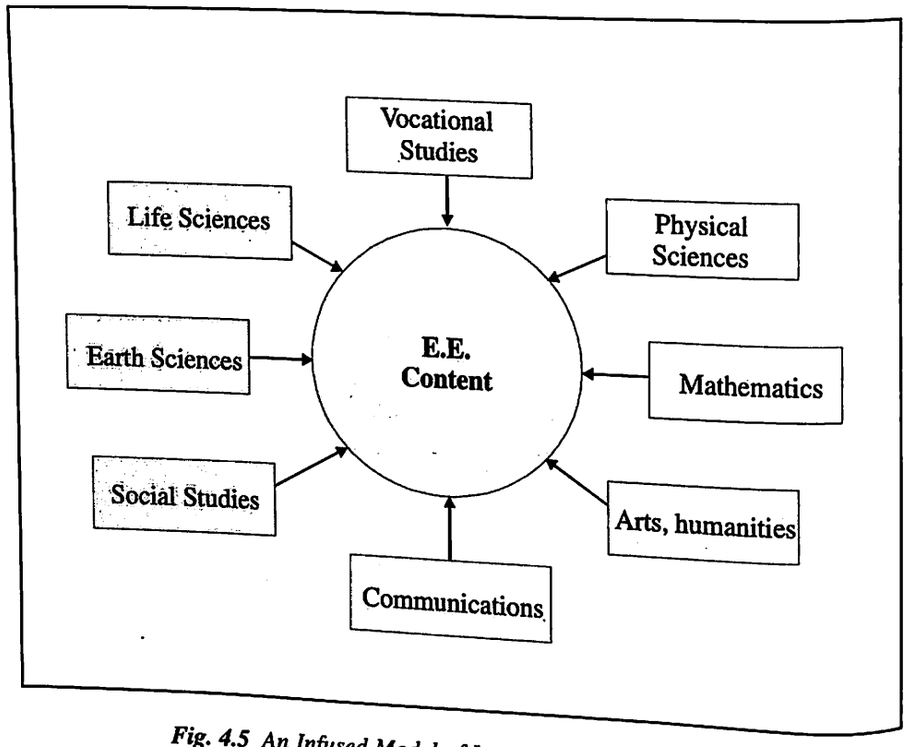



*Fig. 4.5 An Infused Model of Interdisciplinary Approach*

(*Source:* Lahiri et.al., 1993; 49)

### Check Your Progress

5. State any five topics which are considered necessary to be integrated in the curriculum by NCERT.
6. What are the different aspects that need to be considered in the curriculum at different stages by the National Curriculum Framework (2006)?

### Did You Know

The UESCO's Training Workshop on Environment Education (1980) suggested the two models–fused and infusion.





NOTES

## 4.6 SUMMARY

In this unit, you have learnt that:

- The definition of curriculum has changed with the new trend being set in the system of education and its process is continuous, therefore, the new definition of curriculum is very broad.
- The four components of curriculum are: (i) objectives (ii) subject matter (iii) methods and organization (iv) evaluation.
- Curriculum development is a specialized task which needs effective thinking, experience and skill. It is tri polar process in which every element is interrelated.
- The National Curriculum framework (NCF) 2005, has prepared a fresh curriculum of environmental education for different class levels.
- The first international environmental conference at Stockholm in 1972 made some decisions about environmental education.
- In 1986, the National policy on education felt the importance and need of environmental education.
- Infusion means the component of environmental education (EE) is instilled into the various existing disciplines like Biology, Chemistry, Physics, Geography, Economics, Political Science, English and Hindi.
- In the Insertion approach, relevant component of many disciplines are drawn to create a unit of environmental education.
- The interdisciplinary approach in curriculum helps in (i) Understanding the field of different subjects in a better and more realistic manner (ii) Solving various problems of the human society in an effective manner.
- Every discipline has a basic structure. This structure is reflected in the organization of the content and the interrelationship among its various components.
- The classroom curriculum models can be distinguished in two general categories: the topical unit model and the integrated model.
- Multidisciplinary and Interdisciplinary approaches symbolize the whole of environmental education curriculum framework through a range of disciplines.
- In the interdisciplinary approach the content of teaching becomes unified by using matter from various disciplines simultaneously and forming a single subject.

## 4.7 KEY TERMS

- **Pedagogy**: It is the art or science of teaching.
- **Infusion**: It implies that the component of environmental education (EE) is instilled into the various existing disciplines like Biology, Chemistry, etc.
- **Cognitive function**: It is an intellectual process by which one becomes aware of, perceives, or comprehends ideas. It involves all aspects of perception, thinking, reasoning and remembering.

## 4.8 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Environmental Education aims at bringing awareness about the relationship between human beings and environment and the environmental problems/issues we are facing today because of our negative impact. It also provides the basic knowledge about how indigenous tradition and cultural practices are related to the environment. It inculcates habits, values, emotions and attitudes required to maintain and promote quality environment for the survival of mankind. EE aims at developing a sense of responsibility and eagerness to ensure appropriate actions to solve environmental problems.
2. The scope of EE at the school level may be summarized as enabling children to:
   - Connect with their natural and man-made environment understanding our dependence on the various components of environment (biotic, abiotic and man-made)
   - Develop a holistic understanding of their environment
   - Develop a multidisciplinary perspective to understanding of our environmental issues/ problems and appreciate the impact/s of our daily activities on its integrity
   - Develop favourable attitudes and habits to protect and preserve our environment
3. The first international environmental conference at Stockholm in 1972 made some decisions about environmental education. It was felt that to solve the problems created by man's activity within the environment, environment oriented education is required.
4. The major concerns and environmental issues which need to be addressed through the curriculum at different levels are:
   - The concept and meaning of environment
   - Components of environment
   - Natural Resources
   - Pollution and related problems
   - Current environmental concerns and interdependence between man and nature.
   - Energy Management
   - Toxicology
   - Health Hazards
   - Agricultural Environment
   - Ecology or Ecosystem
5. The topics which are considered necessary to be integrated in the curriculum by NCERT are:
   - Natural resources
   - Biological diversity
   - Marine life
   - Environmental degradation
   - Waste Management
6. National Curriculum Framework (2006), has suggested consideration of the following aspects in the curriculum at different stages.

   **Elementary Stage:** Emphasis must be given on topics:
   - 75 per cent building up awareness
   - 20 per cent real life situation
   - 5 per cent conservation of natural resources

   **Lower Secondary Stage:** The topics are arranged in such a manner that more weightage is given to real life situations than awareness:
   - Real life situation
   - Awareness
   - Problems and their solutions

   **Higher Secondary Stage:** The emphasis on the following topics:
   - Conservation
   - Assimilation of knowledge
   - Problem identification
   - Activities and skill

## 4.9 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. What do you understand by curriculum development?
2. Write a short note on the two approaches for environmental education.
3. Briefly describe the topics that should be integrated in the curriculum as per NCERT.

### Long-Answer Questions

1. Explain the relationship between the four components of curriculum.
2. Describe the process of curriculum development.
3. Explain in detail the various objectives related to knowledge, skill and attitudes for effective teaching of environmental education.
4. Explain in brief the course content designed for different stages by the National Curriculum Framework (NCF), 2005.
5. Explain through a diagram the multidisciplinary and interdisciplinary approach.

## 4.10 FURTHER READING

Agarwal J.C; *Education for Values, Environment and Human Rights,* Shipra Publication, Delhi, 2006.

Agarwal J.C.; *Handbook of Curriculum and Instruction,* Doaba Book House, Delhi, 2006.

Bell, D.; *The Coming of Past Industrial Society,* Arnold Heinman Publication, N. Delhi, 1974.

NOTES

Bhatia, S.C (ed).; Papers in Environmental Education, IUACE, N. Delhi, 1984.

Carson,R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

Chakraborty, S.C. (ed); *Value Orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Dutt N.& Gopal H.; *Environmental Pollution and Control,* Neelkamal Publication, New Delhi,. 2005.

Grossland, R.W., & Moor, S.F.D.; *Environmental Studies Project: An Evaluation Report,* Macmillan, London, 1974.

NCERT 2005; National Curriculum Frame work, NCERT edition, Aurobindo Marg, New Delhi.

Sachdeva N. S.; *Curriculum and School Management,* Twenty First Century Publication, Patiala,. 2010.

Sharma R. A.; *Curriculum Development and Instruction*, Surya Publication, Meerut,. 2006.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.





NOTES

# UNIT 5 ROLE OF MEDIA

**Structure**

5.0 Introduction
5.1 Unit Objectives
5.2 Mass Media: Its Use and Abuse for Environmental Education
  5.2.1 Role of Mass Media
  5.2.2 Functions of Mass Media
  5.2.3 Mass Media in Education
  5.2.4 Types of Mass Media
5.3 Educational Broadcasting
5.4 Role of Radio in Education
  5.4.1 Educational Characteristics of Radio
  5.4.2 Major Educational Projects of Radio in India
  5.4.3 Benefits Associated with Radio
  5.4.4 Limitations of Radio Broadcasting
5.5 Role of Television in Education
  5.5.1 Educational Characteristics of Television
5.6 Communication Satellites
  5.6.1 Satellite Instructional Television Experiment
  5.6.2 Indian National Satellite (INSAT)
  5.6.3 GRAMSAT Programme
5.7 Methods of Spreading Awareness on Environment
5.8 Summary
5.9 Key Terms
5.10 Answers to 'Check Your Progress'
5.11 Questions and Exercises
5.12 Further Reading

## 5.0 INTRODUCTION

Mass communication, deals with messages addressed from one to many, mediated by the elements of mass media such as radio, television, film, newspaper, magazine and books. It is the means of transmitting information, ideas and opinions from a mass communicator to a complex audience, technologically. The use of mass media is essential in the process of teaching and learning to realize various socioeconomic, cultural and national goals. Media contributes to the efficiency as well as effectiveness of the teaching–learning process.

In this unit, you will study about the role played by media in spreading awareness about environmental education.

## 5.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the role and functions of mass media
- List the types of mass media
- Discuss the mass media approach to educational technology

NOTES

Bhatia, S.C (ed).; Papers in Environmental Education, IUACE, N. Delhi, 1984.

Carson,R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

Chakraborty, S.C. (ed); *Value Orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Dutt N.& Gopal H.; *Environmental Pollution and Control,* Neelkamal Publication, New Delhi,. 2005.

Grossland, R.W., & Moor, S.F.D.; *Environmental Studies Project: An Evaluation Report,* Macmillan, London, 1974.

NCERT 2005; National Curriculum Frame work, NCERT edition, Aurobindo Marg, New Delhi.

Sachdeva N. S.; *Curriculum and School Management,* Twenty First Century Publication, Patiala,. 2010.

Sharma R. A.; *Curriculum Development and Instruction*, Surya Publication, Meerut,. 2006.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.





NOTES

# UNIT 5 ROLE OF MEDIA

**Structure**

5.0 Introduction
5.1 Unit Objectives
5.2 Mass Media: Its Use and Abuse for Environmental Education
  5.2.1 Role of Mass Media
  5.2.2 Functions of Mass Media
  5.2.3 Mass Media in Education
  5.2.4 Types of Mass Media
5.3 Educational Broadcasting
5.4 Role of Radio in Education
  5.4.1 Educational Characteristics of Radio
  5.4.2 Major Educational Projects of Radio in India
  5.4.3 Benefits Associated with Radio
  5.4.4 Limitations of Radio Broadcasting
5.5 Role of Television in Education
  5.5.1 Educational Characteristics of Television
5.6 Communication Satellites
  5.6.1 Satellite Instructional Television Experiment
  5.6.2 Indian National Satellite (INSAT)
  5.6.3 GRAMSAT Programme
5.7 Methods of Spreading Awareness on Environment
5.8 Summary
5.9 Key Terms
5.10 Answers to 'Check Your Progress'
5.11 Questions and Exercises
5.12 Further Reading

## 5.0 INTRODUCTION

Mass communication, deals with messages addressed from one to many, mediated by the elements of mass media such as radio, television, film, newspaper, magazine and books. It is the means of transmitting information, ideas and opinions from a mass communicator to a complex audience, technologically. The use of mass media is essential in the process of teaching and learning to realize various socioeconomic, cultural and national goals. Media contributes to the efficiency as well as effectiveness of the teaching–learning process.

In this unit, you will study about the role played by media in spreading awareness about environmental education.

## 5.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the role and functions of mass media
- List the types of mass media
- Discuss the mass media approach to educational technology

NOTES

- Identify the concept of educational broadcasting applied in spreading environmental education
- Discuss the role of radio as a form of mass media
- Explain the role of television in spreading education about environment
- Explain different educational broadcasting projects in India
- Discuss the methods of spreading awareness about environmental education

## 5.2 MASS MEDIA: ITS USE AND ABUSE FOR ENVIRONMENTAL EDUCATION

A message can be communicated to mass audience through many media. Mass media is a collective concept that refers to all media technologies, including the Internet, television, newspapers, film and radio, which are used for mass communications. In the Indian context, they coexist with important traditions such as folk dance, drama and puppetry. In other words, the term mass media stands for dissemination of information, ideas and entertainment by the use of communication media. In the later part of the 15th century when printing press was invented, this invention enabled publication of books and newspapers on a large scale.

In the age of science and technology, the role of mass media cannot be overestimated in the developed as well as developing countries in the context of information, entertainment and instruction. The developed countries are more advanced and well-equipped in respect of mass media than the developing countries. This is because of their better economic conditions and technical knowledge.

### 5.2.1 Role of Mass Media

Contemporary authors would like to re-emphasize that the role of mass media cannot be overestimated. It is difficult to spend a single day without the use of mass media. Mass media is a tremendous source of information for individuals as well as society. The role of mass media has been encapsulated in the following points:

(i) **Mass media can bring change:** Media is the most significant channel which informs the public, provides information and amusement, generates political ideas, mobilizes political and social action groups, and generally helps to shape the public policy agenda and priorities. The attitudes and habits of people can be changed with the use of mass media. For example, media plays a pivotal role in spreading awareness about the need for conserving our natural resources. Likewise for eradicating polio there are special programmes and messages disseminated through the media. The media inform people about the importance of administering polio drops to children and about days that are declared as 'polio days'.

The concept of development of a country is again a matter of change, when old practices and equipment are changed, and new and more efficient means are used. Mass media plays an important role in communicating this change. By giving the necessary information and sometimes skills, media can help bring about this change. A mass medium like television can demonstrate and show how things work, for example, one can learn cooking by watching cookery shows on television.





NOTES

(ii) **Mass media have made the world smaller and brought people closer:** Media technology has been able to bring human beings closer. Increased communication and access to information have made the world seem like a smaller place. We are exposed to a broad range of ideas and thought from all kinds of people from all over the world. Media helps in putting together ideas for spreading information and knowledge about environment from all corners of the world. People across the world have been brought closer with the help of media. For example, watching a cricket match between India and England in New Zealand live on television. This gives a feeling of being a part of the crowd in that stadium. Thus, media technologies allow us to virtually take part in occasions and activities in other parts of the world. Events, happy or sad, happenings anywhere can be seen live. Sometimes the entire world seems like one big family. This is how the term 'global village' emerged. Wherever we go to any part of the world, we see the same products such as soft drinks, television, washing machine, refrigerator, etc. We also see the same type of advertisements. Similarly, the World Wide Web and the Internet have brought people and countries much closer. In fact, they have blurred the boundaries between people.

(iii) **Mass media promotes distribution of goods:** Mass media are used by the consumer industry to inform people about their products and services through advertising. Without advertising, the public will not know about various products (ranging from soup, oil, television sets, cars, etc.) and services (banking, insurance, hospitals, etc.), which are available in the market as well as their prices. Thus, mass media help industries and consumers.

### 5.2.2 Functions of Mass Media

Mass media are devices presenting units of knowledge through auditory or visual stimuli, or both, with a view to help learning. They present concrete knowledge and help in making a learning experience appear real, living and vital. The specific functions of mass media have been listed below:

- **Surveillance of environment:** Mass media has been doing the job of collecting and distributing information inside and outside a particular environment. This information flow has paved the way for unity and coherence in the society.
- **Correlation of parts of the society:** After collection and distribution of information, mass media goes ahead with proper interpretation of the same. Thereby, it prescribes a conduct to the society and comments on social value.
- **Transmission of social heritage:** Mass media has been helping in sustaining the society by transmitting social and cultural values from one generation to another.
- **Educating the masses:** The masses have been educated about the various policies of governments and rights and responsibilities through mass media. For example, the media from time-to-time has been informing to the public various laws and Acts that are enacted in India with reference to environmental education.
- **Entertainment:** The entertainment function of the mass media assumes a very important role in the present stressful life. It provides emotional relaxation, intrinsic and cultural enjoyment (i.e., provision of momentary escape from problems) and kills boredom.

NOTES

- **Mobilization:** It helps to advance national development by bringing people together. This is very important not just in India but in developing communities everywhere.

### 5.2.3 Mass Media in Education

Texts and technologies from the media have a significant impact on the understanding and behaviour of individuals. Thus, it can assume an integral role in the functioning of a healthy society. Media affects nearly all aspects of our lives—it acts as a major socializing power, it is a carrier of ethnicity and customs of the society, it is a source of information, education and entertainment, etc. In a democratic set-up, it is an important factor in political communication; and last but not the least, it is a communicator of ideological values and norms, attitudes and beliefs.

According to John Dewey, education is not only about teacher and students but includes the social environment too. The use of mass media is one such example which states that education cannot be limited to the confines of the classroom. It has broken all barriers of colour, region and economical diversities to reach out to all categories of people. Humans educate themselves from various mass media sources, such as, television, radio, newspapers and magazines, news sites and blogs.

The role of mass media in education has been highlighted through its following functions:

- **Providing a variety of information:** The job of the media is to disseminate information, which is rapidly absorbed by the people.
- **Providing vocational information:** Media help in providing vocational and professional information to a larger group of the community.
- **Spreading awareness and civic responsibility:** The media makes people aware of their social responsibilities and duties towards the nation along with their rights.
- **Educational programmes:** Media adds value to education by airing and publishing educational programmes.
- **Role as a non-formal agency:** Media is called non-formal agency which has a wide coverage on educational items in a systematic way.

Mass media are the cheapest and quickest means of educating the people. A teacher must use educational media and methods effectively in the classroom.

Environmental education involves a multidisciplinary process that focuses on critical analysis of environmental issues by gathering information; organizing information, interpreting information to draw conclusions and make inferences. People need to understand that any policy decisions especially decisions on environment related issues have profound influence on their lives and the lives of future generations. And media plays a crucial role in educating and making people environmentally conscious. The mass media plays a pivotal role in educating and shaping public opinion as well as influencing the policy decisions. Common man is the most effective agent of change. Once the civil society is familiar with the complex environmental and developmental related issues, it will gain the confidence to act appropriately leading towards sustainability.

The 'Environmental Education, Awareness and Training (EEAT)' is a flagship scheme of the Ministry for enhancing the understanding of people at all levels about the relationship between human beings and the environment and to develop capabilities skills to improve and protect the environment. This scheme was launched in 1983 with the basic objective to promote environmental awareness among all sections of the society and to mobilize people's participation for preservation and conservation of environment.

EEAT Scheme has the following objectives:

- To promote environmental awareness among all sections of the society
- To spread environment education, especially in the non-formal system among different sections of the society
- To facilitate development of education/training materials and aids in the formal education sector
- To promote environment education through existing educational/scientific/research institutions
- To ensure training and manpower development for environment education, awareness and training
- To encourage non-governmental organizations, mass media and other concerned organizations for promoting awareness about environmental issues among the people at all levels
- To use different media including films, audio, visual and print, theatre, drama, advertisements, hoarding, posters, seminars, workshops, competitions, meetings etc. for spreading messages concerning environment and awareness
- To mobilize people's participation for preservation and conservation of environment

The objectives of this scheme are being realized through implementation of the following programmes launched over the years:

- National Environment Awareness Campaign (NEAC)
- National Green Corps (NGC)
- Seminars/Symposia/Workshops/Conference
- Other Awareness Programmes like Vacation Programmes, Quiz/Essay/Debate/Poster/Slogan competitions, training programmes, etc.

### 5.2.4 Types of Mass Media

Today there are different types of mass media. In fact, mass media refers to different types of useful materials, devices and symbols that make the study of a subject more meaningful and interesting. A few types of mass media are discussed below.

(a) **Print media:** Print media comprises newspapers, magazines, brochures, journals, newsletters, books, and even leaflets, reports and pamphlets. Photography, though a visual media, can also be mentioned under this category, since it is an important mass medium which communicates via visual representations. Though, there are newer and more sophisticated forms of electronic media, still the majority of people prefer the print media for various communication purposes. In the form of government bulletins, newspapers are a worldwide medium. Since the industrial revolution, newspapers have been printed and used for communication. The content of the print media varies according to the target audience or market. Content in newspapers slightly differs from that in magazines, tabloids and newsletters. These mediums serve the purpose of showcasing advertisements,





NOTES

NOTES

news or entertainment-related information to audiences.

(b) **Electronic media:** This form of mass media mainly includes television and radio. Others included in this category are movies, CDs and DVDs as well as new electronic gadgets. The most popular among these are:

(i) **Radio:** By changing the way information was conveyed or transferred, radio marked a new beginning. Radio is one of the most effective medium because this communication medium can transfer or transmit live voices over long distances. A large section of population still depends on radio as a source of important news and information.

(ii) **Television:** In the late 1930s, when televisions emerged, nobody could imagine the kind of influence they would have on our lives. This ever-changing medium started with entertainment and news initially. Gradually, advertisements entered entertainment and news; this gave viewers a chance to learn about different products/services. 'Web TV' has given a new way of accessing the Internet, by providing browsing information and watching videos on large LCD screens. Different programmes on televisions are in the form of talk shows, cooking shows, serials, movies and so on.

(iii) **Video Compact Discs:** VCDs can be used for a variety of educational purposes for which radio is less suitable or convenient. Recordings of conversations, interviews, language uses and discussions can be replayed several times for analysis and many other uses. VCDs, combined with text, allow simultaneous use of sound and vision with the freedom to move from one medium to another as per convenience and the ability to rewind and repeat as necessary. This enables students to have complete control over the medium.

(c) **New-age media:** With the advent of the Internet and other new technologies, a range of high-technology mass media has emerged. This is much faster than old-school mass media and also has a widespread range. New-age media often refers to mobile phones, computers and the Internet. Several new opportunities for mass communication have been opened up by the Internet in the form of email, websites, blogging, Internet TV, etc. Internet technology has revolutionized the way in which information is accessed and paved the way to transfigure all that was considered to be either hidden or inaccessible. Practically speaking, the Internet has made it possible to contact others worldwide, nationally and locally; to send emails and be part of chat rooms and conferences; blogging with discussion boards, opinion polls and forums; webcam viewing; sending and receiving images and files; downloading from the Internet through websites; signing up to a social networking websites; radio stations with live streaming; video streaming and lots more. It has phased out conventional norms, with people of all age groups owning either laptops or PCs today. The news can also be viewed via satellite, with reporters covering onsite events and sending their reports via the Internet to broadcasting news networks. The Internet is both user-friendly and hi-tech. The user is able to access a whole new domain to get information within minutes. For example, like-minded people form groups on social networking sites such as linkedin and vow to take steps to save and protect their surrounding environment.





NOTES

### Check Your Progress

1. What is 'mass media'?
2. Name the different types of mass media.

## 5.3 EDUCATIONAL BROADCASTING

In a limited sense, educational technology means the use of mass media and audio-visual aids in education, or technology in education. It often projects a picture of educational hardware—teaching machines, film-projectors, slide-projectors, language laboratories, tape recorders, satellite television, computers, etc. The approach provides different kinds of tools to help people critically analyse messages, offer opportunities for learners to broaden their experience of media, and help them develop creative skills in making their own media messages. The mass media approach is the answer to many challenges faced by Indian education system in the present context. Mass media is needed for adult, informal and alternative education programmes, developmental activities and agriculture and family planning messages. They are capable of extending educational opportunities to neglected sectors of the community through community radio and television. They can extend teaching situations in the classroom and can tackle obstructions in several aspects of the teaching–learning process. There are several forms of mass media, which have been mentioned earlier. However, a few need elaborate discussions owing to their importance in the changing educational scenario. Within this milieu, broadcasting needs to be understood as a concept and a process because it is the software section of different hardware equipment like radio and television.

The term 'broadcasting' covers transmission of programmes by several types of distribution systems. The commonest of these, particularly in developing countries, consists of transmitters broadcasting from towers to conventional aerials and receivers for radio and television. In some countries, however, educational broadcasters have access to other systems, ranging from satellite and microwave to closed-circuit cable systems. Historically, there have been several different types of electronic media broadcasting:

- **Telephone broadcasting (1881–1932):** This is one of the earliest forms of electronic broadcasting. Telephone broadcasting started with the introduction of 'theatre phone' systems. These were distribution systems based on telephone that allowed subscribers to listen to live opera and theatre performances through telephone lines. Later in the 1890s, telephone broadcasting grew to include telephone newspaper services for news and entertainment programming. These were primarily located in large European cities. These telephone-based subscription services were the first examples of electrical/electronic broadcasting and offered wide variety of programming.
- **Radio broadcasting (experimentally since 1906, commercially since 1920):** Radio broadcasting is an audio (sound) broadcasting service. Radio waves are broadcasted through air, from a transmitter, to a radio antenna and then to a receiver. Different stations located at different places can be linked through

NOTES

radio networks to broadcast common radio programmes, either in broadcast syndication, simulcast (simultaneous broadcast) or sub-channels.

- **Television broadcasting:** The 'telecast', experimentally began in 1925, and commercially since 1930.
- **Cable radio (also called cable television (since 1932):** Both of them are broadcasted via coaxial cable, serving principally as transmission mediums for programmes produced at either radio or television stations, with limited production of cable-dedicated programming.
- **Direct-broadcast satellite (from circa 1974) and satellite radio (from circa 1990):** These are meant for direct-to-home broadcast programming (as opposed to studio network uplinks and downlinks). They provide a mix of traditional radio or television broadcast programming, or both, with dedicated satellite radio programming.
- **Web casting of video/television (from circa 1993) and audio/radio (from circa 1994) streams:** This offers a mix of traditional radio and television station broadcast programming, dedicated to Internet radio-web cast programming.

Some of characteristics of broadcasting are as follows:

- Bound by a fixed schedule
- Governed by scarcity of time
- Ephemeral (non-repeatable and non-retrievable)
- Produced in series
- Aimed at the average target viewer
- Permits only a limited range of interpretation in limited time

The field of mass communication has opened new vistas in education and development. Educational broadcasting has an important role to play in promoting education and development. The work of radio and television in education includes broadcasting of programmes that aim to teach directly and indirectly. They are used in both formal and informal learning. The broadcasters, for example, may specifically have programmes that are designed to be used by teachers in schools to enhance their students' learning in particular subjects. These programmes are therefore intended for formal learning situations. Programmes aimed directly at students, within the formal education system, can be considered along a continuum from enrichment, through learning resource. They meet special needs to direct teaching and curriculum. Direct teaching through television and radio has been used in formal school systems of developing countries in three related, but slightly different ways: (i) to expand the range of the school system and enable pupils who would otherwise have had no formal schooling beyond a certain age; (ii) to improve the quality of instruction in schools, and (iii) to reform the national school curriculum, in such a way that both subject matter and method of teaching are radically changed. Further, there is another category that includes programmes which have a largely indirect purpose, such as drama programmes designed to stimulate class discussion or to broaden the range of reading interests. Nowadays, street plays are organized by college students for spreading awareness about protecting our environment. For example, students display that people should not waste water while brushing their teeth or taking bath.

Students learning by correspondence and broadcasting, as in United Kingdom's Open University or Republic of Korea's Air Correspondence High School, are also in





NOTES

a formal learning situation, although they study at home. The programmes prepared for them to complement correspondence tuitions may sometimes have a direct instructional purpose and sometimes an indirect purpose of maintaining interest in the course.

There are also educational programmes for children and adults that are not related to any specific course. These programmes are designed for informal learning, but they may be quite instructional. They may again serve indirect learning purposes by stimulating interest in the development of microeconomics or by building confidence to improve personal standards of literacy through participation in local classes.

In general, educational broadcasting exhibits five dominant characteristics:

- It assists cumulative learning.
- Its programmes are arranged in series.
- In consultation with external educational planners, they are explicitly planned.
- They cannot be self-sufficient and so other types of learning materials, such as textbooks and study guides usually accompany them.
- Teachers' evaluate the use of broadcasts for making learning more effective.

Educational broadcasting can become a major instrument of education as well as a significant component of distance and alternative learning systems, for various categories of learners. It has been specifically recommended in the draft guidelines of the National Workshop of Educational Broadcasting (UNESCO's-APEID, 1980) as:

- A means of motivation, inspiring people towards national development.
- A major component of the informal education system, providing an alternative approach to education for out-of-school children and adults.
- A direct instructional medium dispensing the need for an intermediary.
- An enrichment for informal system of education.
- A training component for teachers/instructors and supervisors.
- A means of imparting vocational training for agricultural, industrial and professional (medical and engineering) skills.

Educational broadcasting gives learners the option to move away from syllabus-oriented approaches by emphasizing direct teaching and reduction of load in the classroom. For a larger number of illiterates and semi-literates, the broadcasting medium would be a pivotal medium of information, education and communication development. Besides, it can contribute in improving the quality of the education system through training of manpower. The role of educational broadcasting in meeting the needs of a large nation like India, which has the world's second largest population, can be imagined. This has been well-understood by the Government of India and hence efforts are being made to make responsible use of broadcasting to spread education. Two major efforts of the government are discussed below:

(a) **National Guidelines for Educational Broadcasting, 1983:** The Ministry of Human Resource Development issued National Guidelines for Educational Broadcasting (NGEB) in 1983. These guidelines define the role of educational broadcasting for both radio and television. It is, among other things, expected to act as a major component of the non-formal education system, providing an alternative approach to the education of out-of-school children, youth and adults. Acknowledging the priority of making elementary education universal, NGEB

NOTES

states that 'educational broadcasting should be integrated within the total educational system and the responsibility for policy and management of educational broadcasting should be with the educational authority'.

The guidelines further recommend taking cognizance of localized needs, differences in language and culture and other similar phenomena to be so organized that it can be made regional and local.

(b) **National Policy of Education, 1986:** The National Policy of 1968 marked a significant step in the history of education in post-Independence India. It aimed to promote national progress, a sense of common citizenship and culture, and to strengthen *national* integration. It laid stress on the need for a radical reconstruction of the education system, to improve its quality at all stages, and gave greater attention to science and technology, the cultivation of moral values and a closer relation between education and the life of the people. It emphasized the use of educational technology to overcome dualism in structure and spread education to the most remote areas. Educational technology is to be employed to multiply the reach of training to teachers and improve quality, sharpen awareness of art and culture, and inculcate values. And this would be done with the help of the available infrastructure. Both formal and informal sectors would be covered under this.

Other measures envisaged by NPE for use of education technologies are:

- Extension of TV and radio transmission
- Expansion of programme production facilities
- Provision of radio receivers in primary/elementary schools
- Implementation of programmes for computer manpower development
- Introduction of computer science courses at the higher secondary level, extension of computer literacy programmes, etc.

### Check Your Progress

3. What does the term 'broadcasting' cover?
4. What are the four dominant characteristics of educational broadcasting?
5. How does educational broadcasting help learners?

### Did You Know

Save Ganga Movement was started in U.P. and in the adjoining states of India in an attempt to clean the Ganga river.

## 5.4 ROLE OF RADIO IN EDUCATION

The late 19th century saw the development of radio technology and it came into popular usage during the early 20th century. Since its origin, radio has been playing an imperative role in the field of communication. Though sometimes overshadowed by television, radio represents a medium capable of reaching across to a wide geographic audience at low production cost with proven educational results (Couch, 1997). The potential audience for radio is very large in comparison to other forms of mass media.





NOTES

### Radio in India

The Radio Club of Bombay broadcasted the first radio programme in India in June 1923 (Sharma, 2002). Afterwards, a broadcasting service was set up (that began broadcasting in India in July 1927) on an experimental basis in Mumbai and Kolkata. Simultaneously, with two privately owned transmitters, in 1930, the Government of India took them over and started the Indian Broadcasting Service. In 1936, this name was changed to All India Radio (AIR). Later, the name was again changed to Akashvani and since then it is known by this name. AIR is a separate department now and is the biggest media organization of the Ministry of Information and Broadcasting. In the year 1947 the AIR network only had six stations located at Delhi, Mumbai, Kolkata, Madras, Lucknow and Tiruchirapalli. These stations had a total of 18 transmitters; six on medium wave and the remaining on short wave. Radio listening on medium wave was confined to urban areas. As against a mere 2,75,000 receiving sets at the time of Independence, now there are about 111 million estimated radio sets in about 105 million household in the country. At, present, the broadcast scenario has drastically changed with 198 broadcasting centers, including 74 local radio stations, covering nearly cent per cent of India's population. As of today, AIR network broadcasts nearly 2,000 programme hours everyday in 24 languages and 146 dialects. It reaches 97.1 per cent of the population, which includes substantial population in rural area and covers 89.7 per cent of the geographical area of the country. AIR is serving as an effective medium to inform and educate people, besides providing them healthy entertainment.

### 5.4.1 Educational Characteristics of Radio

R.A. Sharma (2006), in his book *Educational Technology,* has identified the educational characteristics of radio as follows:

- ***Easy accessibility*:** Being a comparatively low-cost aid, radio is accessible to a large number of people. Thus, it can be used as a home-based means of communication.
- ***Wide coverage:*** The radio broadcast facility is available almost throughout the country. This feature has enabled radio to extend learning to large geographical areas, including rural locations.
- ***Low capital cost and operating costs:*** The technology involved in radio broadcasting is relatively cheaper. Compared to other forms of electronic media, it is quite economical and needs less production facilities.
- ***Easy learner reception*:** One can listen to radio broadcasts even at work. This covers a wide audience of people who are involved in manual jobs.
- ***Easy production*:** Production of creative radio programmes is simpler compared to a TV or video programme production. No complicated mechanisms or sophisticated instruments are needed for such productions. The manpower involved is also less.
- ***Feasible mode of learner enrichment*:** The most essential function of any form of media in education is enrichment. This function is easier to materialize with the help of radio and with relatively little expense.

NOTES

- ***Cheap mode of direct instruction*:** Radio has been successfully used for direct instruction. This, however, demands intensive and systematic use of radio.

### 5.4.2 Major Educational Projects of Radio in India

All primary channels of All India Radio (AIR) broadcast educational programmes on a regular basis, at fixed time slots. These educational programmes are meant for different categories of people, including students and teachers of primary, middle, secondary and senior secondary schools. Further, they are generally produced in collaboration with national educational agencies like NCERT (National Council for Educational Research and Training) and CIET (Central Institute of Educational Technology). The main projects that describe the progress of radio in education in India are:

(a) **School broadcast project:** As mentioned earlier, before the advent of AIR, there were occasional broadcasts for schools from Mumbai and Kolkata. In 1937, organized school broadcasting started from Kolkata. Funds were allotted to schools to buy radio sets. The radio programmes were broadcasted from Delhi, Kolkata, Chennai and Mumbai. Initially, curriculum did not strictly govern school programmes. Gradually, with time and experience, AIR tried to make its radio broadcasts more curriculum-oriented. However, due to the absence of common syllabi and time tables in schools, even within the same state, these programmes could not succeed in their aim. At present, AIR is assisted by various agencies in planning its educational programmes, particularly programmes for the young and primary and secondary level students. CIET, a wing of NCERT, is one such organization which regularly produces programmes for primary classes. These programmes are broadcasted by Jaipur and Ajmer stations of the AIR.

(b) **Adult education and community development project:** Radio was used for communicating with people living in rural areas and for promoting innovation through broadcasts in the year 1956. The programme was called 'Radio Forum' (defined as a listening-cum-discussion-cum-action group) and was tried in 144 villages within the vicinity of Pune. This kind of programme was originally designed and tried in Canada. UNESCO helped the Government of India to try the programme in the Indian environment. Radio forums of 20 villagers were formed and organized in all these 144 villages. The members listened to a 30-minute radio programme on some agricultural or community development practice, then discussed it and decided whether to take any action on it in their own village. The programme was a success and as a result, many action programmes were planned and put into practice. Researches have shown that people who participated in forums gained substantially in processing information and contributing to constructive decisions.

(c) **Farm and home broadcast project:** This project began in 1966 and was again directed at farmers and villagers. These broadcasts were designed to provide information and advice on agricultural and allied topics. The aim of these programmes was to educate farmers and provide them assistance in adopting innovative practices in their fields, in their own context and relevant to local needs. Occasionally, farm radio schools were conducted by experts, proved to be very effective for farmers and other villagers.

(d) **University broadcast project:** With an aim to expand higher education among different strata of society, this project was started for university students in





NOTES

1965. The programmes under this project were of two types: general and enrichment. General programmes included topics of public interest and enrichment programmes supported correspondence education offered by universities in their respective jurisdictions. Different institutions and bodies like School of Correspondence Studies (University of Delhi) and the Central Institute of English and Foreign Languages (Hyderabad) are well known for preparation and broadcast of their programmes through AIR.

(e) **Language learning programme:** In 1979–80, Language Learning Project, popularly known as 'Radio Pilot project' was started jointly by AIR and the Department of Education, Government of Rajasthan. The programme aimed at teaching Hindi to school going children in 500 primary schools of Jaipur and Ajmer districts on experimental basis. The results of the project found that the programme was successful in improving the vocabulary of children. Encouraged with the success of this project, a similar project was repeated in Hoshangabad district of Madhya Pradesh with some modifications. However, this programme had limited success.

(f) **IGNOU-AIR Broadcast:** Since January 1992, AIR stations of Mumbai, Hyderabad and Shillong started radio broadcasts of IGNOU (Indira Gandhi Open University) programmes, in collaboration with IGNOU. The main target group of this project was obviously the students of open/conventional universities. Shillong later discontinued the programme. Consequently, AIR Mumbai and AIR Hyderabad are the only two broadcasting stations of these programmes.

(g) **IGNOU-AIR Interactive Radio Counselling (IRC):** Another project for students of open/conventional universities was started in May 1998. This is another successful project. In order to bridge the gap between institutions and learners by instantly responding to their queries and also to provide academic counselling in the respective subject, IGNOU in collaboration with AIR Bhopal started this project in May 1998. It began as an experimental programme for one year. With the success of the experiment, it was extended to eight other AIR stations (Lucknow, Patna, Jaipur, Shimla, Rohtak, Jalandhar, Delhi and Jammu). At present, interactive radio counselling is provided every Sunday for one hour from 186 radio stations of AIR. This includes two Sundays on the national hook-up. A toll-free telephone facility is available from 80 cities (effective from February 2001), which enables learners to interact with experts and seek clarification. The 2nd and 4th Sundays of every month are slotted for programmes of various regional centres of IGNOU and state open universities respectively. The slot of 5th Sunday (if any) has also been given to region-based programmes of IGNOU. This programme is gaining popularity day by day.

(h) **Gyan Vani (Educational FM Radio Channel of India):** Another project for the students of open/conventional universities was launched in November 2001. Gyan Vani is the educational FM radio channel of India. It is a unique decentralized concept of extending mass media for education and empowerment, suited for the educational needs of the local community (Sharma, 2002). This channel is operating now on test transmission mode through Allahabad, Bengaluru and Coimbatore FM stations of India. Gyan Vani stations operate as media cooperatives with day-to-day programmes contributed by different

NOTES

educational institutions, NGOs and national level institutions like IGNOU, NCERT, UGC, IIT, DEC, etc. Each station has a radius of about 60 km, covering the entire city/town plus the surrounding environment with extensive access. It serves as ideal medium addressing the local educational developmental and sociocultural needs (IGNOU, 2001). Gyan Vani is not only for the conventional educational system, but also a prime tool in making education available to all. It was developed with an objective of taking education to the doorsteps of the people. A commercial FM radio set also transmits Gyan Vani. Gyan Vani, in addition to giving hardcore education, has also been engaged in spreading awareness on several issues including the following:

- Panchayati Raj functionaries
- Women empowerment
- Consumer rights
- Human rights
- Rights of the child
- Health education
- Science education
- Continuing education
- Extension education
- Vocational education
- Teacher education
- Non-formal education
- Adult education
- Education for the handicapped
- Education for the downtrodden
- Education for tribals

(i) **Radio-vision (multimedia through digital radio):** The technique of radio-vision allows the subject to be presented through two channels, audio and visual. This technique was pioneered by the BBC. Explanation is given through recorded narration and visuals are presented in the form of still filmstrips, charts, slides, models, etc. These are the institutes where it is not possible to access televised educational programmes. In such institutes, radio-vision can be a good substitute. Radio-vision has its own advantages:

- Is economical
- Can cater to different categories of learners
- Is easy to produce such programmes at the institutional level or in learning centres
- Provides visual support to the concept that is taught

In 1975–76, the National Council of Education Training and Research, carried out a small experiment on the use of radio-vision technique, by using it as one of the components of the multimedia package. A series of charts and picture cards were presented to about 24,000 participating teachers in 2,400 centres, along with verbal explanation provided through specially prepared radio broadcasts. The results were found to be encouraging. In the year 2000, another pilot project was carried out at IGNOU, with UNESCO support for testing the feasibility of using the new digital technology for cost effective transmission of audio-visual courseware. The project proved that FM radio transmitters and satellite radio transponders can be used successfully to transmit, downlink, and download multimedia courseware.





NOTES

(j) **Radio-text:** A 'radio-text' environment can be created well by using radio along with textual data transfer via computer networks, simultaneously. A computer network usually provides the data broadcast facility through an FM radio station at the teaching end. The main points of the radio broadcast are sent through textual mode to the receiving end via a computer network. The learning end has a radio and a computer screen to receive textual data. Since both audio and text are broadcasted simultaneously; the learner at the receiving end gets high quality and low cost teaching. An experiment on the use of radio-text at Yashwant Rao Chavan Maharashtra Open University, Nasik, resulted in the satisfaction of more than 80 per cent of the learners. It was also used for peer-group discussion at the receiving end, after the broadcast. This indicates that radio-text could be used for a variety of objectives.

(k) **Campus radio stations:** In December 2002, the Ministry of Information and Broadcasting released its 'Community Radio Guidelines'. Though nominally, community radio policies restrict radio licences under this scheme to 'well-established educational institutions'. Later, India's first campus-based community radio station was launched in 2004 (Anna University's 90.4 Anna FM). Around 15 such stations are in operation today. Most of the campus licences have gone to universities, engineering colleges and mass communications institutions. Transmitting across a range of 5–10 km, their FM radio stations are expected to serve the community beyond the campus walls and to produce programmes 'on issues related to education, health, environment, agriculture, rural and community development', according to the government's Community Radio Guidelines.

(l) **Community radio:** A number of NGOs today are innovating methods to take non-formal education methods to every nook and corner. Since January 2002, cable-operated school audio has been in operation in Budhikote village of Karnataka. A similar cable-audio service is being operated by a development communication NGO in the same village, called 'Namma Dhwani'. Educational programmes were aired through cables twice a week to local schools.

In Gujarat's Kutch region, an independent organization of rural women, the Mahila Vikas Sangathan (KMVS) has been working on education for adolescent girls as well as members of its Sangathan and development of context specific educational curricula on different issues for literates and neo-literates. Back in 1999, KMVS had launched a weekly radio programme, *Kunjal Panchchi Kutch Ji,* which sought to spread the message of literacy and build an information network. The 30-minute programme was broadcast in the local Kutchi dialect over AIR's local stations in a region with vast distances and poor communications.

(m) **Satellite radio for education:** EDUSAT is the satellite exclusively devoted to meet the demands of educational sector. It was launched on September 20, 2004, by Indian Space Research Organization (ISRO) to meet ever increasing demand for an interactive satellite-based distance education system for the country. It has revolutionized classroom teaching through IP-based technology. EDUSAT has five KU band transponders providing spot beams, one KU beam transponder providing national beam and six extended C-band transponders providing national coverage beams.

NOTES

Consortium for Educational Commission (CEC) is one among the five primary users of this educational satellite. ISRO has adjudged the CEC as 'the best EDUSAT National Beam User' in July 2008.

At present, there are over hundred Satellite Interactive Terminals (SITs) and Receive only Terminals (RoTs) under CEC EDUSAT network, installed at various colleges, academic staff colleges and universities across the country. Many more are being added with the purpose of providing quality higher education to the remote areas through satellite network. CEC EDUSAT network is empowering students through cutting edge technology and caters the needs of students across the country.

***EDUSAT live transmission:*** In the live transmission, CEC acts as the teaching end. Subject experts deliver lectures live. These lectures are received by various SITs and RoTs. They are known as 'classroom end'. The 'teaching end' can be shifted from one SIT to another. Thus, the students can benefit from experts located in various Educational Institutions across the country.

The expert can address the queries of the students in the live mode. The students can interact and ask questions using the following three methods.

### CHEERS (Children's Enrichment Experiment through Radio)

CHEER Programme was meant for pre-school children of socially deprived classes studying in Anganwadis in the age group of 3-6 years. It was carried out in four states viz Andhra Pradesh, Orissa, Haryana and Uttar Pradesh respectively from Visakhapatnam,Cuttack, Rohtak and Lucknow for a year starting from 2nd October 1992. It was a joint venture of All India Radio, Department of Women and Child Development and National Council of Educational Research and Training (NCERT). The serial attracted the target audience and policy makers alike with a continued demand to replicate the experiment in other languages. The serial was repeated from All India Radio, Lucknow and also extended to Union Territory of Andaman & Nicobar Islands from Port Blair (in Hindi) from 02.10.1995. On persistent demand from the State Government of Andhra Pradesh, CHEER programme was repeated once again from AIR, Vishakhapatnam with effect from 2 October 1996. All these reflect the popularity gained by the serial among target audience.

A baseline study was conducted by NCERT in Haryana to find out the impact of the CHEER programme which revealed the following facts:

- Nearly 50 per cent of the Anganwadi Workers were listening to the programme regularly
- Half of them commented the programme to be clear and interesting
- A very negligible i.e. nearly 4 per cent and 33 per cent of the AWWs were conducting the pre and post broadcast activities respectively, that also without prior planning.
- Guide books were not supplied in time and even radio sets were provided only after a year of completion of the programme
- Lack of coordination among the implementing agencies and the schedules was responsible for not getting the full impact

The success of such serials and their positive impact on listeners led radio to go for many more such serials on different problems and finding out some solutions. In all these programmes outside agencies acted as collaborators and the serials are successfully implemented.





NOTES

### 5.4.3 Benefits Associated with Radio

Radio can be used as an effective and interesting tool in education both for formal and non-formal education. Where conditions have permitted, it has become well established and widespread; yet, it seems that insufficient educational use is made of this virtually universal method of distribution. People often seem to have been deterred by the greater efficiency of other media which, however, have the major defect, compared with radio of being unable to cope for such widespread distributions. The very low cost and adequate reliability in all climates mean that radio broadcasting should more and more be recognized as a particularly suitable medium for educational purpose. Radio, in reality, has been used extensively as an educational medium both in developed and developing countries since inception. Its educational programmes supported in a wide range of subject areas in different countries. Educational radio has also been employed within a wide variety of instructional design contexts. In some cases it is supported by the use of printed material, by local discussion group, and by regional study centres. It is sometimes so designed to permit and encourage reaction and comments of the listeners. Evaluations are also carried out with the feedbacks received.

**Radio** is cheap, most easily accessible and its signals cover almost the whole country. However, on an average there are only 4.4 radio/transistors sets per 100 persons. Eighty per cent of radios are in urban homes, and only about six million sets of radios are with 525 million rural population. Furthermore, the frequency of listening to the radio is relatively low: only 35 per cent of the interviewees declared to listen to the radio regularly, most of them ranking between half an hour and two hours per day.

In addition to the relatively small number of people listening to the radio the role of radio in creating environmental awareness cannot be considered an important one due to the fact that there are only very few regular environmental programmess, although there is an instruction by Supreme Court for all media that programmes on environment should be broadcast. Motivated by the Ministry of Environment &Forests, Delhi FM is broadcasting two weekly programmes on environment, 'Kinare – Kinare' and 'Ao Dilli Savaren'.

Pollution of environment is only unsystematically tackled in programmes designed for special target groups, e.g. rural population, industrial workers, programmes for women or children. The issues mentioned and the way they are dealt, are adjusted to the target group and the background of the programme:

- Science programmes focus on scientific explanations and new technical developments
- Children's programmes have a more educational and motivational approach
- City programmes are addressing local problems like air, water and noise pollution and so on

The national level of broadcasting news on environment are very scarce, if news on environment are broadcast this is most often at the regional level.

In sum, radio is well below its potential in creating environmental awareness and over the last few years no increase in broadcasts on environment can be observed. Nevertheless, there has been at least one progressive approach in the use of radio in environmental is in 1998, All India Radio, the Indian National Radio Network, addressed environmental issues such as water, air and noise pollution, deforestation, solid waste disposal, organic farming and other topics in a 52- episode entertainment-education radio serial 'Yeh Kahan Aa Gaye Hum' ('Where have we arrived?'), a story of rural background in which a factory is constructed near a small village.

NOTES

The **entertainment-education communication strategy** purposely designs and implements a media message to both entertain and educate. 'Yeh Kahan Aa Gaye Hum' was produced under the leadership of Mrs. Usha Bhasin with the assistance of the Central Pollution Control Board of India. This serial was broadcast weekly with repeated versions from June to December via 31 radio stations covering seven Indian states in the densely populated Hindi-speaking areas of northern India. Due to the wide pre-program publicity via radio, television, press and NGOs working in the broadcast area it was able to attract a listenership of around 100,000 people. While the serial itself addressed environmental issues in an entertaining manner, trying to contact the listeners in their everyday life context, the epilogues usually delivered by a credible media celebrity advertised the educational message. The approach was an interactive one: A competitive spirit was fostered among listeners by awarding prices for the quality of provided feedback, outstanding community work by listeners in the realm of environmental conservation was also recognized. Impact studies accompanying the broadcasting process showed that the radio serial provoked not only past-broadcast discussion, but also the founding of clubs in which members listened to the serial collectively and started campaigns to save the environment.

'Yeh Kahan Aa Gaye Hum' is an excellent example that the use of entertainment education communication strategies in the field of environment can be equally successful as in social ones in which it has been practiced before. Programs through the medium of radio can reach the less educated and rural parts of the population and therefore its role is extremely promising in the years to come.

### 5.4.4 Limitations of Radio Broadcasting

The different limitations associated with radio broadcasting are:

- It is not a flexible medium, and there is no face-to-face interaction. It is a one-way communication process.
- It cannot be effectively used for all subjects, especially science subjects.
- Production of radio programmes requires expertise.
- It is only an auditory presentation.
- Radio cannot offer personal contact, unlike the classroom teacher.
- Radio lessons cannot account for the presence of listeners (as with books) or whether they are listening or not.
- Radio cannot take into account individual differences in the class. The broadcast cannot do much more than assuming that every pupil at a certain level is able to comprehend everything. Furthermore, immediate feedback is another thing which is missing in the radio broadcast, where there is face-to-face discussion.

To overcome these drawbacks, preparation, supporting materials and follow-up exercises are recommended when possible (McIsaac and Gunawardena, 1996).

#### Check Your Progress

6. When was the first radio programme broadcasted in India?
7. Define 'radio-vision'.
8. How is a radio-text environment created?





NOTES

## 5.5 ROLE OF TELEVISION IN EDUCATION

Television is an important mass media to disseminate education through formal and information methods. Television also helps to make the masses conscious of the environment, rights, duties and privilege. It is a source of teaching etiquettes, language skills, hobbies, social relations and religious believes. The medium is used for formal, non-formal and informal education. To support formal education, television usually functions as a supportive and reinforcement tool. Television can be attached with school curriculum.

Role of television is neither fixed nor easily tangible and measurable. The role is directly related to the question of how the planners are serious and determined to use television. The role could either be enormous or, on the contrary very little depending on the specific tasks and available resources. Generally television can help to achieve the following objectives:

- Social quality in education
- Enhance quality in education
- Reduce dependency on verbal teaching and teachers
- Provide flexibility of time and space in learning.
- Stimulate learning
- Provide mass education opportunities

Television in distance education fulfills the functions mentioned below:

- Supporting and enhancing teaching
- Instructing
- Explaining , clarifying
- Summarizing
- Reinforcement
- Motivation and encouragement
- Using as supplementary for the other materials
- Imposing study speed ( determining rate of study)
- Presenting a reference to large masses
- Changing behaviour
- Presenting unreachable facts and events

Depending on how one looks at the status of educational television in the world today, one sees either a glass half full or a glass half empty. Great advances have been made worldwide in forging inventive applications. Many different programme genres have been used to address diverse audiences for a variety of formal and non-formal learning purposes, with scientifically measured results. The record of accomplishments is impressive, yet TV is drastically underutilized as a teaching tool in countries that have the highest prevalence of urgent and otherwise unmet education needs. The large gap that exists between the state of the art and the state of practice in the use of television for development has many causes, including a major lapse of international attention to national capacity building and application. It, however, serves manifold functions of entertainment, transmission of information and education.

NOTES

Among the nations that receive the greatest amounts of international assistance in health, education, child rights, ecology and the environment, many now contain 20 to 40 million or more individuals who regularly see TV. This means that in some of the most economically limited countries of the world, tens of millions of households of very meager means have invested in the purchase of a TV set which for them is immensely expensive. Although these sets are purchased mainly for entertainment, the result is to make one of the world's most powerful educational tools available on a massively wide scale to many people in the world who have limited access to education through other means. A critical mass of TV viable countries now exists for educational purposes, to justify undertaking unprecedented levels of international coordination in such areas as experience exchange, training, resource development, and national and regional capacity building.

Model uses of TV for national development have emerged in widely separated times and places, but never has a determined human effort been made in a single locale to realize anything approaching the full scope and impact of television in its capacity to teach, illuminate, and empower. Totally absent in developing countries at the close of the 20th century are exemplars of carefully planned, comprehensive national policies geared to making the best-informed and most rational uses of television to address the highest priority education needs, based on a realistic sense of what these nations actually are going to spend.

The literature on educational uses of TV focuses, variously, on applications of particular TV program genres; research and evaluation practices; evaluation results; design of effective educational and motivational program approaches; specialized producer and researcher training; and patterns of international co-production. The Japan Prize Contest, now a decades-old tradition, serves as a screening center for identifying and honoring the best educational programs from all over the world, and as a venue for professional exchange. The NHK generously makes its library of prize-winning programs available for study at selected centers located around the world.

## Analyzing Current Indian Policies and Practices

On 15 September 1959, television first came to India in the form of the National Television Network of India (named Doordarshan), with its first station in Delhi. The use of technology for education in India has come a long way from its hesitant start in the 1950s. Momentum triggered by the SITE and other experiments of the 1970s have enabled the system to develop to a stage where India may be the only country in the world to have its own satellite dedicated to the cause of education and where, in a unique combination of small and large media, of traditional and cutting edge information and communication technologies, the country is poised to become a knowledge super power and a learning community.

One of India's major advantages has been the ability of the national government to play a pivotal role in framing policy, and providing vital financial support to address issues. Indian educators are also concerned about the alienation between the educational system and the demands of the workplace. Educational administrators are also concerned with making the system responsive and relevant to the needs of the society, keeping in mind the three basic needs of access, equity, and resources mentioned earlier.

The use of educational broadcasting as it exists in India today happened, driven by the desire to experiment with technology for development and educational purposes and promoted by small groups of committed individuals and institutions. Emerging out of the broad policy statement of 1952 cited earlier, specific implementation designs, planning, system design, funding, institutional structures, norms and practices came later and have evolved over time when solutions had to be found for problems. The Indian experience has been with both closed and open user groups and on dedicated and free to air transmission channels of Doordarshan, with a variety of interaction mechanisms from satellite remote terminals to normal telephone lines, fax, and to a lesser extent, e-mail. It has ranged in content from broad general purpose and developmental broadcasting in support of agriculture and basic and non-formal education to instructional programme in support of course materials. It has included both simple transmission and interactive teleconferencing.

There are key problems in the Indian experience. Reformers and proponents of the use of any Information and communication technology (ICT) in education have generally been government officials, far removed from the realities of day-to-day classroom teaching and with little knowledge of the way in which ICTs can be made to work effectively. It has been wholesale vendors who have seen 'total' solutions to school problems in the technology of the day. Simply stated, it has been educational administrators who do not understand technology or teaching, or technologists who have no clue to educational pedagogy and practice.

Current Indian experience, whether it is with EDUSAT, or the National Programme for Technology Enabled Learning (NPTEL), the National Mission on Education through Information and Communication Technology or the Sakshat portal, are all well intentioned as attempts to increase access and standardize the quality of content. Yet they show an indifference to ground realities and a distinct lack of understanding of both technologies and educational pedagogy.

Due to the high level of illiteracy in India, electronic media are in a key position. Furthermore, inquiries have shown that both radio and **television** are perceived as authoritative and friendly media by vast percentages of the population. Television has become one of the most powerful and effective means of propaganda and persuasion. Most Indian homes have cable and satellite connections. Television has become a new status symbol even in remote villages. In rural areas people have access to television e.g. in small restaurants and long route busses. Probably, the rapid growth rate of television sets (3 million annually) will even increase the importance of television in the future. A further advantage of television as an educational media is that it is helpful in teaching practical work— a televised presentation can be as clear as a face-to-face demonstration.

With an average amount of 138 minutes spent on watching television per day, television dominates newspaper and radio not only in the frequency of usage, but also in the amount of time spent watching it.

Considering these promising prerequisites for the use of television in environmental education it is good news that — compared to newspapers and radio — television does a good job in covering environmental issues. Discovery Channel, National Geographic Channel and Animal Planet Channel are broadcasting exclusively on endangered species, wild and sea life. The national channels are regulated by law to offer environmental programs. Doordashan the most important channel of dissemination that reaches all over the country has three regular programmes on environment: each of the weekly broadcasts of scientifically profound 'Earth Matters' focuses on one special environmental problem. Targeted at educated people 'Earth Matters' offers information on the sources, explains the consequences of the problem considered and





NOTES

NOTES

gives suggestions for solution by changing individual behaviour. Weekly 'Terraquiz', India's first environmental quiz show on television, was a competition of the top ranking schools from Green Olympiad. 'Nature Plus' was broadcast daily, most often however at midnight. The broadcasting of a forth weekly programme of 30 minutes named 'Earth' in form of a magazine that subsidizes successful initiatives of individuals is planned by the Ministry of Environment & Forest in cooperation with Doordashan. In addition to that BBC's 'Earth Report' offers exclusive information on environment and with the daily broadcast of 'The new adventures of Captain Planet' on Cartoon Network a programme on environmental issues especially designed for children.

It is true for television that even if there is no consistent programming on environment, ecological issues are tackled in the news as well as in children's, health, science, rural, agricultural and educational programmes.

In contrast to radio and newspaper, politicians have recognized the potential of televisions in creating environmental awareness so that the Ministry of Environment and Forests grants special money for the production of films on environment. Although advertisements on television are highly cost intensive the Ministry of Environment & Forests has proposed to Discovery Channel to produce 50 seconds of informational advertisements on nature and pollution that should be broadcast four times per day and changed monthly.

### 5.5.1 Educational Characteristics of Television

Some of major characteristics associated with television in education, as penned by R.A. Sharma (2006) are as follows:

- *Higher quality of instruction:* Television programmes are generally well planned or organized and better presented than usual classroom instructions.
- *Flexibility:* Rapid and continuing change can be incorporated well and courses can be updated as per changes in the curriculum and needs of the society. This is not possible with other forms of media like video cassettes.
- *Cost-effectiveness:* If utilized on a large scale, television would prove to be a cost-effective medium.
- *Wide scope:* In education, television can be utilized for a large number of objectives like education of teachers, students, community orientation, etc.
- *Combination of audio and visual components:* Television has the advantage of audio as well as video. This enhances its appeal as compared to radio and print media.
- *Mass education:* Owing to the presence of both audio and visual components, the mass appeal of television is enormous. Thus, this medium can be effectively utilized for mass education on areas of national importance, responsible citizenship and similar other issues.

**CHECK YOUR PROGRESS**

9. What are the three main functions of television?
10. When was television introduced in India?





NOTES

## 5.6 COMMUNICATION SATELLITES

Communication technologies are of current or potential interest to educational technologists and planners. Satellites were first outlined for use in communication, in 1945 by Arthur C. Clarke. Two decades later, a stationary satellite was used in a geosynchronous orbit for communication purposes. The applications currently contemplated for communication satellites in education are indeed diverse, reflecting the differences in educational systems in nations or regions where uses of communication satellites have been proposed. In developing countries like India, emphasis is on taking advantage of wide-area coverage and broadcast capabilities of the satellite to provide a quantum jump in communication abilities, and to expand and improve the basic education system quickly. Generally, educational services of a satellite would be developed in conjunction with local distribution facilities such as cable-television systems; instructional television fixed services systems, regional terrestrial networks and broadcast facilities. Satellites are beneficial for providing educational services to large but sparsely populated areas. The role of satellites in the delivery of educational services can be seen in Table 5.1.

*Table 5.1 Primary Role of Satellite in Delivery of Educational Communications*

| Service | Primary role of satellites |
|---|---|
| Instructional television | Direct delivery to schools and learning centres, to broadcast stations, ITFS and cable head-ends for further distribution. |
| Computer-assisted instruction | Delivery of CAI to small, remote institutions, particularly those which are at distances of 70–80 miles or more, from major metropolitan areas. |
| Computing resources multi-access interactive computing | Delivery of interactive computing to remote institutions for purposes of problem-solving and implementation of EIS. |
| Remote batch processing | Delivery of raw computing power to small and remote institutions for instructional computing and administrative data processing. |
| Computer interconnection | Interconnection of the computer facilities of institutions of higher education and regional computer networks for resources sharing. |
| Information resources sharing interlibrary communication | Interconnection of major libraries for bibliographic search and interlibrary loans, etc. |
| Automated remote information retrieval | Interconnection of institutional and/or CATV head-ends with major information storage centres. |
| Teleconferencing | Interconnection of educational institutions for information exchange, without physical movement of participants and for gaining access to specialists. |

**Source:** (Singh and Sudarshan, 2006).

NOTES

In India, as far as usage of satellites in education is concerned, SITE deserves a special applaud. Hence, it is being discussed in detail in the next section.

### 5.6.1 Satellite Instructional Television Experiment

India's interest in the practical uses of space communications technology dates back to early 1960s, when Dr Homi Bhabha and Dr Vikram Sarabhai exhibited great foresight on active space research programme in the country. In 1963, a decision was made to set up on Experimental Satellite Communications Earth Station (ESCES) at Ahmedabad. Around the same time, India's first earth station was set up, a pilot Agricultural TV project (called 'Krishi Darshan') was initiated by Dr Vikram Sarabhai. This project which was inaugurated on 26 January 1967, aimed primarily at demonstrating the effectiveness of TV as a medium for propagating new agricultural practices.

Later in 1975, the Department of Atomic Energy of the Government of India entered into an agreement with National Aeronautics and Space Administration (NASA) of the USA to jointly conduct a Satellite Instructional Television Experiment (SITE). The aim was to provide informal education to the rural population of India through an intimate medium of communication. Accordingly, the SITE programme was launched on 1 August 1975. This joint venture of NASA, Indian Space Research Organization (ISRO) and All-India Radio (AIR), had the following objectives:

(i) Exploring the potential of satellite for nationwide communication, through the medium of TV.

(ii) Broadcasting instruction programmes in the field of agriculture, family planning, education, etc.

SITE made use of the first satellite capable of transmitting television programmes directly to community receivers. SITE is basically a hybrid system combining both direct reception from satellite and reception through terrestrial transmitters linked to the satellite. Its rediffusion facilities cover a range of earth stations and a wide range of TV transmitters. It was a pioneering project of immense significance, particularly to the developing world. A spacecraft for the experiment was provided under a bi-lateral agreement by the United States and the ground segment. The organization management and programming were entirely India's responsibility. The experiment continued for a year since 1 August 1975 to 31 July 1976, covering more than 2,400 villages in six Indian states and territories. The television programmes were produced by AIR, which were broadcasted by NASA's ATS-6 satellite, stationed in the space above India. The project was supported by various international agencies such as the UNDP, UNESCO, UNICEF and ITU.

This experiment was successful as it played a major role in helping to develop India's own satellite programme, INSAT. The project proved that India had the mettle to use advanced technology for fulfilling its socioeconomic requirements. Experiments similar to SITE were then carried out in various countries, which determined the importance of satellite TV in providing education. Further, on the technical side, the experiment prompted important research and development activities and stimulated the local electronics industry. It gave opportunity for experimenting in programming to village audiences for innovative and low-cost production.

#### Objectives

As per the Memorandum of Understanding, the objectives of the project were divided into two parts: (i) general and (ii) specific.





NOTES

General objectives of the project were to:

- Gain experience in development, testing and management of a satellite-based instructional television system, particularly in rural areas, and to determine its optimal parameters
- Demonstrate the potential value of satellite technology in rapid development of effective mass communications in developing countries
- Demonstrate the potential value of satellite broadcast TV for practical instruction of village inhabitants
- Stimulate national development in India, with important managerial, economic, technological and social implications

The primary general objectives of the project, from an Indian perspective, were to educate people about issues related to family planning, agricultural practices and national integration. The secondary objectives were to impart general school and adult education, train teachers, improve other occupational skills, and improve general health and hygiene through the medium of satellite broadcasts. Besides these social objectives, India also wanted to gain experience in all technical aspects of the system, including broadcast and reception facilities and TV programme material.

For USA, the primary objective was to test the design and functioning of an efficient, medium-power, wide-band, space-borne FM transmitter that operated on 800–900 MHz. USA also wanted to gain experience of utilization of this space application.

#### International collaboration

A joint ISRO-NASA working group was established even before the Memorandum of Understanding (M.U) was signed. This group studied the possibility of using a communications satellite for TV broadcast in India. After the MoU was signed, many review meetings were held between NASA and ISRO scientists. Indian scientists visited NASA to study front-end converters and earth station operations. On India's request, the INTELSAT organization agreed to provide free satellite time for pre-SITE testing.

The United Nations Development Programme (UNDP) provided $500,000 in the form of assistance for setting up the Experimental Satellite Communications Earth Station (ESCES) at Ahmedabad. The International Telecommunications Union (ITU) was nominated as the executing agency for this project. The UNDP provided another $1.5 million, for setting up a TV studio at Ahmedabad and a TV transmitter at Pij in Kheda district. It also provided assistance in setting up a TV training Institute to train many programme production staff members, who would join All India Radio to work on SITE. UNESCO was the executing agency for this project. UNICEF contributed to SITE by sponsoring 21-film modules produced by Shyam Benegal a noted Indian film-maker.

#### Technical details

The production of television programmes was decentralized, with three base production centres located at Delhi, Cuttack and Hyderabad, and an ISRO studio located in Mumbai. Each of the centres had a production studio, three IVC tape recorders, two 16-mm projectors, a slide projector in Telecine and an audio equipment. Each centre also had 2 to 3 full fledged synchronized sound camera units, an editing table (Delhi

had two) and a film processing plant. There was also a sound dubbing studio equipped with a pilot tone recording plant and an audio mixing console.

Television programmes prepared by the Indian Government at these four studios were transmitted at 6 GHz to ATS 6 from one of two ground stations located at Delhi and Ahmedabad. These signals were then re-transmitted at 860 MHz by the satellite. They were directly received by 2,000 villages with the help of community television receivers having 3 parabolic antennas. Regular television stations also received the signals and broadcasted them to another 3000 villages. Each television signal had two audio channels to carry audio in two major languages of each cluster. This set-up was called the Direct Reception System (DRS). Apart from direct broadcasts, earth station at Ahmedabad was micro-wave linked with the TV transmitter built in the village of Pij. The Delhi studio was linked to terrestrial TV transmitters of AIR. A receive-only station was built in Amritsar and linked with the local TV transmitter.

The DRS undertook terrestrial broadcasting for large cities and direct broadcasting to SITE television sets for remote villages. However, it did not provide for small towns where the density of TV sets was higher than that in villages. The concept of a low-power limited rebroadcast (LRB) TV transmitter system was evolved to overcome such situations. Two suitable locations, Sambalpur in Orissa (75 villages) and Muzaffarpur in Bihar (110 villages), were tentatively identified for implementing LRB transmitter systems. This experiment was expected to provide useful data on the trade-off between DRS and LRB. However, due to financial constraints, these two LRBs had to be shelved and another LRB was set up at Satish Dhawan Space Centre (SHAR), Sriharikota.

### Village selection

As the broadcasting time was limited, it was decided that direct reception receivers would only be installed in 2400 villages, in six regions spread across the country. Technical and social criteria were used to select suitable areas to conduct this experiment. These areas were Rajasthan, Bihar, Orissa, Madhya Pradesh, Andhra Pradesh and Karnataka. As one of the aims of the experiment was to study the potential of TV as a medium of development, villages were chosen specifically for their backwardness. SITE was launched in 20 districts spread across six states. Each of the states thus selected was called a cluster. In each cluster, 3–4 districts, each containing around 1000 villages were identified. Finally, around 400 villages were chosen from each cluster. Close to 80 per cent villages selected for SITE did not have electricity in the buildings where the SITE TV sets would be installed. A special project called 'Operation Electricity' was launched to urgently electrify villages before the start of SITE. Around 150 villages had television sets running on solar cells and batteries.

### Programming

All India Radio (AIR) was primarily responsible for generating programmes that were made in consultation with the government. Special committees on education, agriculture, health and family planning identified their own programme priorities and conveyed it to AIR. Two types of programmes were prepared for broadcasting: (i) Educational television (ETV), and (ii) instructional television (ITV).

(i) ETV programmes were meant for school children and focused on interesting and creative educational programmes to spread awareness of the changing society and motivation to respond to these changes. The aim was to broadcast programmes for children during school hours that: (a) teach them community living skills; (b) improve their basic concepts and skills in the areas of mathematics, language and technocracy; (c) instill habits of hygienic and healthy living; (d) promote aesthetic sensitivity; and (e) make them aware of the process of modernization of life and society around them and changes in resultant attitudes. The programmes while attempting to create a positive attitude to formal education, try to widen the children's horizon and familiarize them with facts. The scope of the programme therefore, consists of three main factors: (a) attitudes, (b) information, (c) skills and habits. These programmes were broadcasted for 1.5 hours during school timings and were focused at making education more appealing, creative, purposive and stimulating; and also to create awareness in the changing society. During holidays, this time was used to broadcast *Teacher Training Programmes,* designed to train almost 1,00,000 primary school teachers.

(ii) ITV programmes were meant for adult audiences, mainly those who were illiterate. They were broadcasted for 2.5 hours during evenings. The programmes covered health, hygiene, family planning, nutrition, improved practices in agriculture, and events of national importance.

Thus, programmes were broadcasted for four hours daily in two transmissions. The targeted audience was categorized into four linguistic groups:

(a) Hindi, (b) Oriya, (c) Telugu, and (d) Kannada. Programmes were produced according to the language spoken in the cluster. Due to linguistic and cultural differences, it was agreed that all core programmes would be cluster-specific and in the primary language of the region. A brief commentary giving a gist of the programme was available on the secondary audio channel to keep up the interest of the audience in other language regions. All clusters received 30 minutes of common programmes, including news, which would be broadcasted only in Hindi.

### Evaluation

The social research and evaluation of SITE was done by ISRO's special SITE Research and Evaluation Cell (REC). Impact on primary school children was studied under a joint project involving ISRO and the National Council of Educational Research and Training (NCERT). SITE transmissions had a very significant impact on the Indian villages. For the entire year, thousands of villagers gathered around TV sets and watched the shows. Studies were conducted on the social impact of the experiment and on viewership trends. It was found that general interest and viewership were highest in the first few months of the programme (200 to 600 people per TV set) and then declined gradually (60 to 80 people per TV set). This decline was due to several factors, including faults developing in the television equipment, failure in electricity supply and hardware defects. The villagers' pre-occupation with domestic or agricultural work added to these factors. Impact on the rural population was highest in the fields of agriculture and family planning. Nearly 52 per cent of the viewers reported themselves amenable to applying the new knowledge gained by them. Towards the end of the SITE programme, a substantial number of respondents opined that the government took greater interest in promoting the welfare of poorer sections by disbursing loans and giving other facilities more liberally than before. After introduction of the SITE programme, some benefits of watching television were recognized. Even occasional viewers broadened his outlook.

NOTES

SITE established considerable success of educational television programmes and more importantly, the acceptance of TV as an educational force in Indian rural primary schools. It also revealed the greater potential of TV for communicating directly to children, and as such recommended for stimulating their interest and curiosity to learn from ETV programmes.

The focus was on the use of terrestrial transmission for television signals before the launch of SITE. It was with the advent of SITE that India could make use of advanced technology to fulfil its socioeconomic needs. This led to an amplified spotlight on satellite broadcasting in India. ISRO began preparations for a nationwide satellite system. ISRO was launched in 1982 by the Indian National Satellite System, after conducting several technical experiments. The Indian space programme remained committed to the goal of using satellites for educational purposes. EDUSAT was launched by India in September 2004. It was the first satellite in the world built exclusively to serve the educational sector. EDUSAT is used to meet the demand for an interactive satellite-based distance education system for India.

### 5.6.2 Indian National Satellite (INSAT)

INSAT was the result of previous experiments like SITE, STEP and APPLE. It was a multipurpose satellite system for telecommunications, broadcasting, meteorology, and search and rescue services. INSAT, the largest domestic communication system in the Asia-Pacific Region, was commissioned in 1983. It was a joint venture of the Indian Department of Space (DOS), Department of Telecommunications, India Meteorological Department, All India Radio and Doordarshan. The history of INSAT space segment is as follows:

- Insat-1D, last of the Insat-1 series was launched in 1990
- Three ISRO-built satellites and Insat-2A were launched in July 1992
- Insat-2B was launched in July 1993
- Insat-2C was launched on 7 December 1995
- Insat-2DT was acquired from Arabsat
- Insat-2E was launched on 3 April 1999
- Insat-3B was launched on 22 March 2000
- Insat-3C was launched on 24 January 2002
- Insat-3A was launched on 10 April 2003
- Insat-3E launched on 28 September 2003
- In 2005, INSAT 4 series began, with the launch of INSAT 4A in December 2005, INSAT 4B in March 2007, INSAT-4CR on 2 September 2007
- Lately, in May 2011, GSAT-8 was inducted in the INSAT system

GSAT-8 is India's advanced communication satellite. INSAT. Some of its services are mentioned as follows:

- The INSAT system provides mobile satellite services, in addition to VSAT services in the telecommunications sector. Today, more than 25,000 Very Small Aperture Terminals (VSATs) are in operation.
- INSAT has been very advantageous in television broadcasting and redistribution. Owing to the technology of INSAT, more than 900 million people in India have access to TV, through about 1,400 terrestrial rebroadcast transmitters.
- INSAT has enabled, aided and empowered social development through exclusive channels used for training and developmental education.
- INSAT provides radio networking.
- INSAT has succeeded in providing a telemedicine network. This network has been designed to take super-speciality medical services to remote and rural areas. The network now covers 152 hospitals—120 remote rural hospitals and 32 super-specialty hospitals in major cities.
- Another fillip was added to educational services with the launch of EDUSAT. It is India's first thematic satellite dedicated exclusively for educational services at different levels.
- Meteorological services are also provided by INSAT through Very High Resolution Radiometer and CCD cameras on a few of its spacecrafts. Moreover, cyclone monitoring through meteorological imaging and issue of warnings about impending cyclones through disaster warning receivers have been operationalized. As many as 350 receivers have been installed along the east and west coasts of India for this purpose.
- INSAT has been substantially used for educational purposes like nationwide classroom programmes conducted by University Grants Commission (UGC), educational television programme broadcasted in local languages for the benefit of rural population and programmes broadcast by Indira Gandhi National Open University (IGNOU). It is also being used in educating industrial workers, training block and village level extension and agricultural workers and farmers, etc.

### 5.6.3 GRAMSAT Programme

The GRAMSAT Programme (GP) was planned as an initiative to provide communication networks at the state level. These networks connect different state capitals with districts and blocks. The networks provide computer connectivity, data broadcasting and TV broadcasting facilities and have applications like e-Governance, National Resource Information System (NRIS), Development Information, Teleconferencing, Disaster Management, Tele-medicine and Distance Education. The purpose of GRAMSAT was to broadcast education at all levels from elementary through university and for training agricultural, industrial and local government workers. GRAMSAT networks operate in the States of Orissa, Andaman and Nicobar Islands, Rajasthan and West Bengal. Plans are being made to provide integrated services through a single hub to state networks. This single hub would be like a grid for diverse developmental services. It would integrate Satcom networks having existing communication infrastructure for seamless information through hybrid systems. GRAMSAT was planned to provide continuing education for special groups to ensure that their skills are upgraded regularly. As part of a nationwide GRAMSAT project, Swaran Jayanti Vidya Vikas Antarkish Upagraha Yojana (Vidyavahini) has been inaugurated in Orissa using INSAT 3B.

## Check Your Progress

11. When were satellites first outlined for use in India?
12. What is SITE?
13. How are meteorological services provided by INSAT?

NOTES

## ACTIVITY

Research on Internet and make a list of TV broadcasting government initiatives on education.

## 5.7 METHODS OF SPREADING AWARENESS ON ENVIRONMENT

Let us now go through some of methods through which mass media spreads awareness about environmental education.

(a) **Dialogue:** One of the methods of spreading awareness about the environment is through dialogue that takes place between two or more people. People while travelling or walking in groups in the parks or elsewhere tend to discuss about the environment. Dialogue is one of the means through which information about the environment spreads from person to person.

(b) **Debate:** Nowadays, environmental education has become such a grave concern that debates are now organized in schools\ colleges which is also one of the means of spreading information about the environment.

(c) **Discussion:** In the present times, various television news channels hold discussion on several issues concerning the environment. Even the Regional Working Associations of various societies\ apartments invite social activists and hold discussions on the topic of environmental education.

(d) **Drama and quiz:** This is another popular medium of spreading awareness about environmental education. For instance, in 2012, the Bengal state government had started the 'save Ganga campaign.' As a part of this campaign, the state government organized an elocution contest, quiz, drama, dance, drama and performance by a Bengali music band, all based on the 'save Ganga theme'.

(e) **Seminars, workshops, symposium, meetings and speeches:** This is another method of spreading awareness about the environment. For instance, the Indian Environmental Society (IES) is a non-profit development organization which was established in India in 1972. This society on a regular basis organizes seminars, workshops, symposia. For example, IES organized a seminar on 'Weather and Wetlands' in September, 2013.

(f) **Field survey and trips:** This is one of the methods through which children can gain hands-on experience about the efforts being taken to protect and conserve the environment.

(g) **Quiz, projects, models, charts, books and exhibitions:** One of the most popular means of engaging students in environmental education is by organizing quiz, making projects, models, charts and reading books. Nowadays, schools organize exhibition where projects and models, prepared by students are displayed and the students of other school are invited to view them and accordingly, prizes are awarded to the students to motivate them.

(h) **Eco-clubs:** Eco-clubs play a significant role in creating environmental awareness among the future generations. Roughly, 2000 eco-clubs have been established in government and private schools of NCT of Delhi. The activities performed by these eco-clubs include:





NOTES

(i) Encouraging the students to keep their surroundings neat and clean and especially green by planting saplings.

(ii) Promoting the principle\value of conserving water by reducing the use and wastage of water.

(iii) Motivating the students towards the concept of waste management which includes throwing garbage only in dustbins.

A well known example is that of eco-clubs that have been established in selected schools in three districts of Tamil Nadu with the aim of spreading environmental education.

(i) **Songs and street plays:** These days various societies which are organized for the purpose of spreading environmental education spread the message about their activities through songs and street plays. For example, Local green NGO Green Vigil Foundation organized a street play in Nagpur in 2013 with the aim of spreading awareness about environmental issues among the general public.

## CHECK YOUR PROGRESS

14. List the activities performed by an eco-club.
15. How do songs and street plays assist in spreading awareness about environmental education?

## 5.8 SUMMARY

In this unit, you have learnt that:

- Mass media has the potentiality to ensure that education reaches people in all geographies.
- In the present scenario, teachers who are responsible for educating children since their childhood should realize their accountability and make extensive use of mass media. They can work on and improve their teaching skills using technology efficiently.
- In absence of access to national and community media, different public education programmes would not have been used to their maximum potential. It is possible to consider programmes that rely entirely on face-to-face education, but even these will not succeed in absence of appropriate supplementary means of advertising, events and news coverage.
- Radio and television are the popular mediums of mass media. Broadcasting is a new trend and technique in the field of education. Last few decades have been witness to rapid developments in communication technologies.
- Radio broadcasting still remains the cheapest mode of mass communication in India benefiting rural and deprived communities with low literacy rate and little excess to education.
- Some educational advantages of using broadcasting include improvement in quality and relevance, low cost and increase accessibility. The challenges presented by such form of education include lack of dual interaction, lack of

NOTES

clarification, interruptions in transmissions, fixed pace for all and lack of space for reflection on content being taught.

- Nowadays, environmental education has become such a grave concern that debates are now organized in schools\colleges which is also one of the means of spreading information about the environment.
- One of the most popular means of engaging students in environmental education is by organizing quiz, making projects, models, charts and reading books.

## 5.9 KEY TERMS

- **Print media:** Print media comprises newspapers, magazines, brochures, newsletters, books, and even leaflets and pamphlets.
- **Gyan Vani:** Gyan Vani is the educational FM radio channel of India. It is a unique decentralized concept of extending mass media for education and empowerment, suited for the educational needs of the local community.
- **Satellite Instructional Television Experiment (SITE):** This project made use of television for imparting information and knowledge to the rural population in six states of India in 1975.
- **Edutainment:** This implies imparting education through the medium of various popular formats such as quiz shows or soap operas.
- **Teletext:** It is a form of communication system wherein text and graphics are transmitted as digitized signals through air broadcasting or cable channel for display on television sets.

## 5.10 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Mass media is a collective concept that refers to all media technologies, including the Internet, television, newspapers, film and radio, which are used for mass communications.
2. The different types of mass media are: print media, electronic media and New-age media.
3. The term 'broadcasting' covers transmission of programmes by several types of distribution systems.
4. Educational broadcasting exhibits the following dominant characteristics:
   (i) Its programmes are arranged in series to assist cumulative learning.
   (ii) They are explicitly planned in consultation with external educational advisers.
   (iii) They are commonly accompanied by other kinds of learning materials such as textbooks and study guides.
   (iv) There is some attempt made to evaluate the use of broadcasts by teachers.
5. Educational broadcasting gives learners the option to move away from syllabus-oriented approaches by emphasizing on direct teaching and reduction of load in the classroom.
6. The Radio Club of Bombay broadcasted the first radio programme in June 1923.





NOTES

7. The technique of radio-vision allows the subject to be presented through two channels—audio and visual. Explanation is given through recorded narration and visuals are presented in the form of still filmstrips, charts, slides, models, etc.
8. A 'radio-text' environment can be created well by using radio along with textual data transfer via computer networks, simultaneously.
9. The three main functions of television are: (i) entertainment, (ii) transmission of information, and (iii) education.
10. On 15 September 1959, television first came to India in the form of the National Television Network of India (named Doordarshan), with its first station in Delhi.
11. Satellites were first outlined for use in communication, in 1945, by Arthur C. Clarke.
12. SITE is basically a hybrid system combining both the direct reception from satellite, and the reception through terrestrial transmitters linked to the satellite.
13. Meteorological services are provided by INSAT through Very High Resolution Radiometer and CCD cameras on a few of its spacecrafts.
14. The activities performed by these eco-clubs include:
    (i) Encouraging the students to keep their surroundings neat and clean and especially green by planting saplings.
    (ii) Promoting the principle\value of conserving water by reducing the use and wastage of water.
    (iii) Motivating the students towards the concept of waste management which includes throwing garbage only in dustbins.
15. Songs and street plays play a vital role in spreading awareness about environment. For example, Local green NGO Green Vigil Foundation organized a street play in Nagpur in February, 2013 with the aim of spreading awareness about environmental issues among the general public.

## 5.11 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. How does mass media help in bringing about a change in people's way of thinking?
2. List the functions of mass media.
3. What are the different types of mass media used in present times?
4. List some characteristics of broadcasting.
5. What are the five dominant characteristics of educational broadcasting?
6. What are the limitations associated with radio broadcasting?

### Long-Answer Questions

1. Discuss the educational characteristics and limitations of a radio.
2. Enumerate the educational advantages of television, and describe the role of television in distance education.

NOTES

3. Critically evaluate the role of mass media in the common man's life.
4. Discuss the impact of Satellite Instructional Television Experiment on broadcasting in India.
5. Discuss the role of communication satellites in India's education system.
6. How does mass media influence society?
7. How can community radio be used for informal education?
8. Discuss the application of communication satellites in higher education.
9. Explain the methods which assist in spreading information about environmental education.

## 5.12 FURTHER READING


Bell, D.; *The Coming of Past Industrial Society*, Arnold Heinman Publication, New Delhi, 1974.

Bhatia, S.C (ed).; *Papers in Environmental Education*, IUACE, New Delhi, 1984.

Carson,R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

Chakraborty, S.C. (ed); *Value Orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Grossland, R.W., & Moor, S.F.D.; *Environmental Studies Project. An Evaluation Report*, Macmillan, London, 1974.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.






NOTES

# UNIT 6 EVALUATION IN ENVIRONMENTAL EDUCATION

**Structure**


6.0 Introduction
6.1 Unit Objectives
6.2 Concept of Evaluation in Environmental Education
6.3 Types of Evaluation in Environmental Education
6.4 Why Evaluation is Required?
6.5 Evaluation Process
6.6 Characteristics of a Good Evaluation Process
6.7 Role of Teacher and Students in Evaluation Process
6.8 Role of Departments and other Agencies in Evaluation Process
6.9 Obstacles to Evaluation
6.10 Co-curricular Activities in Environmental Education as Evaluation Tool
6.11 Summary
6.12 Key Terms
6.13 Answers to 'Check Your Progress'
6.14 Questions and Exercises
6.14 Further Reading


## 6.0 INTRODUCTION

Evaluation is a wider concept than testing and measurement and is supposed to judge the worth of all the educational outcomes brought about as a result of teaching–learning process. Evaluation is a wider term than examination. It was introduced in the 1930s as a reaction against subject-centered and skill-centered examination. For environmental education many instructional material and projects are considered but they do not consist of any evaluation component.

In this unit, you will study about the concepts, types of evaluation and tools of evaluation in environmental education.

## 6.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Analyse the concept of evaluation in environmental education
- Discuss the different types of evaluation
- Explain the evaluation process and its characteristics
- Describe the different co-curricular activities used for evaluation

NOTES

## 6.2 CONCEPT OF EVALUATION IN ENVIRONMENTAL EDUCATION

Holistic development of the child is the aim of modern education. Growth and development can be effectively judged and appraised by a continuous process of evaluation. The term evaluation process ascertains the workability of learning experiences and change of behaviour of the student. Evaluation is performed on the basis of both qualitative and quantitative process.

The term evaluation in the context of Environmental Education has been defined in the following manner:

- Evaluation is a process that critically examines a programme. It involves collecting and analysing information about a programme's activities, characteristics, and outcomes. Its purpose is to make judgments about a programme, to improve its effectiveness, and/or to inform programming decisions (Patton, 1987).
- Evaluation is judging the worth or value of environmental education programme—its products, ends, or outcomes (its effectiveness) and its processes, means, or ways of doing its job with limited resources (its efficiency).
- Evaluation differs from research, which is not so much concerned with making judgments as it is with searching, seeking out, and gathering new information to further knowledge.

The lack of success of evaluation process in environmental education may be due to reasons such as:

- Objectives of programme are stated in an unambiguous language
- Results of the programme are not evaluated in terms of objectives
- Instrument used for measurement lacks authenticity and reliability
- Process of evaluation may turn futile if the programme is unstable, unpredictable, and inconsistent
- Discrepancies between evaluators and other external agencies can also lead to failure of evaluation process

**How Evaluation Helps?**

It is important to periodically assess and adapt activities to ensure their effectiveness.

- Evaluation can help in identifying areas for improvement and ultimately help in realizing goals more efficiently.
- Evaluation helps in determining the effectiveness of results and if the results are not effective, evaluation helps in reaching out to the shortcomings.
- Evaluation enables in demonstrating the success or progress of a designed programme.
- Evaluation helps to identify the effectiveness of teaching processes.
- It helps to find out the weaknesses, abilities, interests, attitudes of the students.
- Evaluation helps in diagnosis and remedy for social, emotional and educational problems with their environment.





NOTES

One of the best ways to view the benefits from evaluation is to see them as four interrelated components of environmental education programme (see Figure 6. 1).

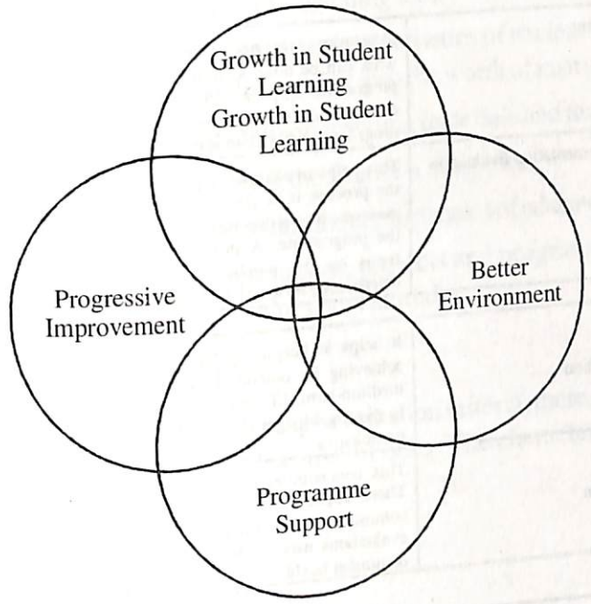



*Fig. 6.1 Components of Evaluation*

Evaluation Can Lead to a Better Environment The ultimate goal of environmental education is a healthful and healing environment. Learning by doing is a major way of teaching environmental education.

Students can become involved in projects in which they act directly to improve their environment, such as, tree planting. Students can also become involved in projects in which they act indirectly to improve their environment, such as, communicating a concern about an environmental problem to an official who can then act directly on it. Evaluating the environmental effects of these activities can help you judge not only the growth in your students but the worth of your instructional programme.

## 6.3 TYPES OF EVALUATION IN ENVIRONMENTAL EDUCATION

P. W. Airasion and G. F. Madaus have categorized evaluation procedures in the following manner:

- **Placement Evaluation:** Determine pupil performance in the beginning of instruction
- **Formative Evaluation:** Monitor learning progress during instruction
- **Diagnostic Evaluation:** Diagnose learning difficulties during instruction
- **Summative Evaluation:** Evaluate achievement at the end of instruction

Within the categories of formative and summative, there are different types of evaluation:

| Types of Evaluation | Purpose |
|---|---|
| **Formative** | |
| 1. Needs Assessment | Determines who needs the programme, how great the need is, and what can be done to best meet the need. An EE needs assessment programme helps in determining the shortfalls of the programmes and provide a deep insight about what can characterize a new programme which can serve the needs of people appropriately. |
| 2. Process or Implementation Evaluation | This helps in examining how the process is carried out and whether the process is at par with the objectives. It can be a continuous assessment or a one-time assessment. Its results are used to improve the programme. A process evaluation of an EE programme may focus on the number and type of participants reached and/or determining how satisfied these individuals are with the programme. |
| **Summative** | |
| 1. Outcome Evaluation | It helps in keeping a track of the progress of the programme in achieving its outcomes. These outcomes may be short-term and medium-term. EE outcome evaluations may examine improvements in the knowledge, skills, attitudes, intentions, or behaviours of the participants. |
| 2. Impact Evaluation | This concentrates on determining the impact of the programme. These impacts are the net effects, typically on the entire school, community, organization, society, or environment. EE impact evaluations may focus on the educational, environmental quality, or on human health. |

## 6.4 WHY EVALUATION IS REQUIRED?

Evaluation is required for the following reasons:

- Evaluation complements planning. A well designed viable evaluation plan shells out better results than an evaluation carried out hastily.

  Lack of time and resources affects the performance of the evaluation process. The evaluation process requires a sound expertise, and a good knowledge about evaluation
- The importance of evaluating environmental education teaching will not only benefit students or school but also benefits whole of the community.
- Evaluation of Environmental Education teaching can help in developing a more efficient teacher and a diligent educator who wants to improve and do something about EE.
- Evaluation demonstrates accountability.
- It can improve the Instructional Programme.
- Evaluation can result in the improvement of the effectiveness and efficiency of teaching methods and learning activities.
- Evaluation can result in the improvement of the effectiveness and efficiency of the learning environment. This includes classroom, the environment outside of the classroom —the physical, emotional, and social climate of the school setting and the community.
- Evaluation can lead to greater growth in learning of the students. Growth in learning as an acquisition of knowledge, the clarification of values and development of moral reasoning, and the improvement of independent critical thinking and action skills.
- Evaluation can help in diagnosing the learning needs of students so that the teachers can be more efficient and effective in correcting deficiencies and fostering growth.
- Evaluation, itself, is an effective teaching tool.
- Evaluating the environmental effects of activities of students can help in judging not only the growth in the students but also the worth of instructional programme.
- Evaluation can help in developing teaching materials and teaching strategies.
- Evaluation helps in monitoring the learner's outcomes.
- Evaluation also helps in enhancing the competencies of educators and professionals.
- It also helps in planning researches, projects and programmes for developing environmental awareness, values, and attitudes.

### Characteristics of Evaluation

Although there are no 'right' or 'wrong' evaluation criteria, there are better and worse ones, or at least more useful and less useful ones. The characteristics of evaluation criteria are as follows:

- Accurate and unambiguous
- Comprehensive but concise
- Direct and ends-oriented
- Measurable and Consistently Applied
- Can be crafted to address the different needs and objectives of EE
- Understandable
- Practical
- Sensitive
- Evaluation is inclusive
- Is honest
- Is replicable and its methods are as rigorous as circumstances allow

**CHECK YOUR PROGRESS**

1. Name the different types of evaluation.
2. State any five characteristics of good evaluation.

**DID YOU KNOW**

Majority of the work on environmental education within the last quarter century has been guided by the Belgrade Charter (1975) and Tbilisi Declaration (UNESCO, 1978)

NOTES

## 6.5 EVALUATION PROCESS

Evaluation procedures serves as a tool not to measure the extent of achievement to the educational objectives but also to develop, review and modify suitably the educational objectives and the learning experiences in an ongoing process. The evaluation procedure in this scheme of interrelated network then may take the initial intermediary and terminal position in the course of activities of a given educational programme. At the initial stage it may be to identify the learner's ability at the course entry level so that learning experiences to be given to the course entrance may be designed in an appropriate (qualitative and quantitative) manner.

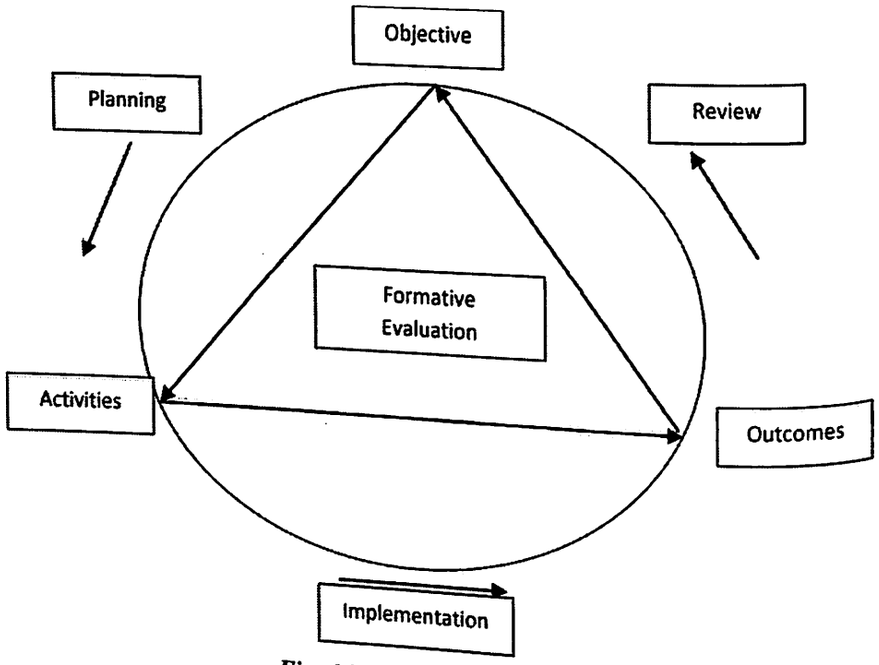



*Fig. 6.2 Process of Evaluation*

At the intermediary position it may help the teacher to check the effectiveness of the course, the achievement of the learner and his pace of learning thereby it may help both the teacher and the learner to monitor the progress of learning towards the set objectives. At the terminal level, it may help to ascertain the achievement of set goals and also to grade learners on their attainment

In the above figure, the rim of the wheel is the educational process involving continuous cycling of interrelated events: assessment of student needs, consideration of goals and objectives, development of the instructional activities and learning environment in student learning. The spokes are, in effect, the links between the hub and rim and support the rim at its four key points. If each point is not kept in good adjustment and balance with the others, movement of the educational process could be somewhat wobbly and out of line.

The following steps form the framework for the evaluation process:

- Deciding the objectives and need
- Planning the evaluation process
- Conducting and implementation of the evaluation process
- Making use of the results for further planning and remedial actions





NOTES

## 6.6 CHARACTERISTICS OF A GOOD EVALUATION PROCESS

The following characteristics are required to build and support an evaluation system.

- **Evaluation process is well planned:** While setting goals or the objectives of the programme, teachers are required to identify various ways to measure these goals and objectives, analyse the information collected and make use of it.
- **Evaluation process is continuous and updated:** To make sure evaluation is on track, teachers update their documents on a regular basis, adding new strategies, changing unsuccessful strategies, revising relationships in the model.
- **Develop an evaluation culture: By** motivating, encouraging and rewarding participation in evaluation helps in building opportunities, communicating a convincing and unified purpose for evaluation, and celebrating evaluation successes.

## 6.7 ROLE OF TEACHER AND STUDENTS IN EVALUATION PROCESS

### Role of Teacher

- The teacher and students should be intimately involved in the evaluation of the environmental education programme. Teachers are closely associated with the evaluation programme because they spend the maximum time with it and help in influencing the students on it
- The teacher is directly responsible for programme's efficient and effective operation.
- Teachers are responsible to gather information and make decisions based on that information.
- The decisions of the teachers will ensure the efficiency and effectiveness of programme.

### Role of Students

Not only it is important for the teacher to be an evaluator, but also students should be evaluators. As recipients of the programme, they have a rightful role, and their shared opinions, feelings and insights about the programme, what they learned and the evaluation, itself, can be of special value. The need for the role of the students in evaluation process lies in the ability of independent and critical thinking of the students that makes the evaluation process even more effective. For example, if students are provided with a conducive atmosphere to share their opinions and freely come out with random ideas about environmental issues and solutions without getting threatened, they will feel involved and will be more inclined towards environmental issues and will be willing to find out the solutions. When the students will perceive that their judgments will not work against them, they will be encouraged to think freely and critically about environmental problems and issues.

NOTES

It is then incumbent to incorporate measures in evaluation programme that give consideration to the following suggestions:

- Make purposes of the evaluation programme and use of the results clear to students and non-threatening
- Give students the opportunity to participate in the planning of the evaluation programme
- Consider the rights of students with regard to the access and release of information
- Ensure anonymity in release of the information

### Check Your Progress

3. What is the purpose of evaluation in environmental education?
4. What is the role of a teacher in the evaluation process?

## 6.8 ROLE OF DEPARTMENTS AND OTHER AGENCIES IN EVALUATION PROCESS

### 1. National Forest Commission and India's Afforestation Programme

In 2003, National Forest Commission was set up in India to review and assess India's policy and law, its effect on India's forests, its impact of local forest communities, and to make recommendations to achieve sustainable forest and ecological security in India. The report made over 300 recommendations which included the following:

- India must pursue rural development and animal husbandry policies to address the needs of the local communities, like the need to find affordable cattle fodder and grazing grounds. To avoid destruction of local forest cover, fodder must reach these communities.
- The Forest Rights Bill, which became law in 2007, is likely to be harmful to forest conservation and ecological security.
- The government should work closely with mining companies. Revenue generated from leasing of the mines must be pooled into a dedicated fund to conserve and improve the quality of forests in the region where the mines are located.
- Each Indian state should have the power to declare ecologically sensitive areas.
- The mandate of State Forest Corporations and government owned monopolies must be changed.
- Government should reform regulations and laws that ban felling of trees and transit of wood within India. Sustainable agro-forestry and farm forestry must be encouraged through financial and regulatory reforms, particularly on privately owned lands.

India's national forest policy expects to invest US$ 26.7 billion by 2020, to pursue nationwide afforestation coupled with forest conservation, with the goal of increasing India's forest cover from 20 per cent to 33 per cent.





NOTES

### 2. The Centre for Environment Education (CEE)

The Centre for Environment Education (CEE) in India was established in August 1984 as a Centre of Excellence supported by the Ministry of Environment and Forests. The organization works towards developing programmes and materials to increase awareness about the environment and sustainable development. The head office is located in Ahmedabad. The Centre has 41 offices across India.

CEE works for a wide range of sectors, target groups and geographical areas. CEE sees a major opportunity in the UN Decade of Education for Sustainable Development (2005–14) to further contribute towards sustainable development.

CEE's programmes focus on:

- Training and Capacity Building
- Internships and Programmes
- Consultancy Services
- Knowledge Centre for ESD
- Journal onEducation for Sustainable Development

## 6.9 OBSTACLES TO EVALUATION

- ***Evaluation is not a myth:*** There is no myth about evaluation. It is simply gathering and using information to judge the value and effectiveness of whatever is done
- ***Time:*** The greatest obstacle to evaluation is that it requires time for preparation and teaching. To overcome this constraint is to build evaluation into programme from the beginning. It is also possible to spread out evaluation activities by concentrating at different times on different components of programme such as classroom setting and various teaching methods
- ***Expense:*** The major expense in most evaluation is in the hiring of a consultant. It is based on the premise that a worthwhile evaluation can be conducted by teachers. Major expenses are carried out in the implementation of the plan.
- ***Subjectivity:*** There can be a doubt on the subjectivity of the programme when it is planned, guided and evaluated by a teacher.
- ***Complexity:*** Sometimes the complexity of the evaluation plan hampers the success of the evaluation process.

## 6.10 CO-CURRICULAR ACTIVITIES IN ENVIRONMENTAL EDUCATION AS EVALUATION TOOL

Evaluation should be made not just on scholastic aspects but also on co-scholastic aspects which depend to a large extent on the learning ambience and learning culture of an institution.

The main goal of co-curricular activities in environmental education are:

- To improve the quality of environment.
- To create awareness among the people on environmental problems and conservation.

NOTES

- To create an atmosphere for participating in decision making capability ,developing an evaluation programmes of environmental education starting from a very young age, children should be taught about the environment that surrounds them.

The six key characteristics of good environment education material are fairness and accuracy, depth, emphasis on skills, building action orientation, instructional soundness and ability. The course content of environmental education can be classified stage wise. These stages are as follows.

### 1. Primary School Stage And Upper Primary School Stage

Here the emphasis should be mostly (75%) on building up awareness followed by real-life situation (20%) and conservation (5%). Thus, attempt should be only to sensitize the child about environment. The content to be used should be from the surrounding area, from home, school and outdoor. Teaching can include a number of co-curricular activities for evaluation such as:

- Visit reports and interviews
- Story telling
- Drawing and painting
- Song and poem competition
- Environmental games
- Collection of things like leaves and flowers
- Speech and debate competition
- Essay competition
- Decoration of bulletin boards
- Camps and planning & evaluation of activities
- Excursion reports
- Clubs and display boards

All the above activities can be organized by students in the guidance of teachers and they can be awarded marks and grades according to their performances. These marks and grades can be shown in their final cumulative records.

### 2. Secondary and Senior Secondary Level

The activities that can be evaluated at the secondary and senior secondary level are as follows:

- Gardening
- Projects on environmental issue
- Assignments, exhibition , cultural activities
- Quiz on environmental

### 3. College Level

Activities that can be organized at the college level are:

- Community services
- Seminar





NOTES

- Survey, projects, research, and group discussion
- Conferences
- Environmental excursions
- Stage play etc

The students can be evaluated by their performances, responsibility, provided them to make them aware problem solving and skill full professional.

### CHECK YOUR PROGRESS

5. What are the goals of co-curricular activities?
6. Name the five types of activities at college level.

### ACTIVITY 1

- Make a project report of any project undertaken by your institution.
- Prepare an assignment on conservation of resources.

## 6.11 SUMMARY

In this unit, you have learnt that:

- The aim of modern education is all-round development of the child and his growth and development can be effectively judged and appraised by a continuous process of evaluation.
- Evaluation procedures serves as a tool not to measure the extent of achievement to the educational objectives but also to develop, review and modify suitably the educational objectives and the learning experiences in an ongoing process.
- Educational evaluation serves a number of purposes that ultimately contribute to the improvement of the instructional methods, textbooks, curriculum and even advancement of our educational goals.
- Continuous and Comprehensive evaluation is a system of assessment that evaluates all spheres of student's development.
- The techniques of evaluation are means of collecting evidence about the student's development in desirable directions. Our technique of evaluation should necessarily be valid, reliable, usable and defined by objectives.
- Different types of evaluation are: (a) Placement Evaluation, (b) Formative Evaluation, (c) Summative Evaluation and (d) Diagnostic Evaluation.
- Evaluation is judging the worth or value of environmental education programme - its products, ends, or outcomes (its effectiveness) and its processes, means, or ways of doing its job with limited resources (its efficiency is an integral part of any teaching task.

NOTES

- Evaluation can help in identifying areas for improvement and ultimately help in realizing goals more efficiently.
- Evaluation helps in determining the effectiveness of results and if the results are not effective, evaluation helps in reaching out to the shortcomings.
- Evaluation helps in determining the effectiveness of results and if the results are not effective, evaluation helps in reaching out to the shortcomings Evaluation enables in demonstrating the success or progress of a designed programme.
- Evaluation is well planned and continuously updated.
- The teacher and students should be intimately involved in the evaluation of the environmental education programme. Teachers are closely associated with the evaluation programme because they spend the maximum time with it and help in influencing the students on it.
- Evaluation should be made not just on scholastic aspects but also on co-scholastic aspects which depend to a large extent on the learning ambience and learning culture of an institution.

## 6.12 KEY TERMS

- **Placement Evaluation:** Determine pupil performance in the beginning of instruction
- **Formative Evaluation:** Monitor learning progress during instruction
- **Diagnostic Evaluation:** Diagnose learning difficulties during instruction

## 6.13 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The different types of evaluation are:
   - Placement Evaluation
   - Formative Evaluation
   - Diagnostic Evaluation
   - Summative Evaluation
2. Some of the characteristics of a good evaluation are when the following are adhered:
   - Accurate and unambiguous
   - Comprehensive but concise
   - Direct and ends-oriented
   - Measurable and Consistently Applied
   - Can be crafted to address the different needs and objectives of EE
3. Evaluation procedures serves as a tool not to measure the extent of achievement to the educational objectives but also to develop, review and modify suitably the educational objectives and the learning experiences in an ongoing process.
4. The role of a teacher in evaluation is as follows:
   - The teacher and students should be intimately involved in the evaluation of the environmental education programme. Teachers are closely associated with the evaluation programme because they spend the maximum time with it and help in influencing the students on it





NOTES

- The teacher is directly responsible for programme's efficient and effective operation.
- Teachers are responsible to gather information and make decisions based on that information.
- The decisions of the teachers will ensure the efficiency and effectiveness of programme.

5. The main goal of co-curricular activities in environmental education are:
   - To improve the quality of environment.
   - To create awareness among the people on environmental problems and conservation.
   - To create an atmosphere for participating in decision-making capability, developing evaluation programmes of environmental education, starting from a very young age, children should be taught about the environment that surrounds them.
6. The five types of activities at the college could be:
   - Community services
   - Seminar
   - Survey ,projects ,research, and group discussion
   - Conferences
   - Environmental excursions
   - Stage play

## 6.14 QUESTIONS AND EXERCISES

**Short-Answer Questions**

1. Briefly describe how evaluation is applied to the concept of environmental education.
2. List the various types of evaluations.
3. Write short notes on (a) evaluation process (b) characteristics of good evaluation process.
4. Why is evaluation needed in environmental education?

**Long-Answer Questions**

1. Explain the concept of evaluation in environmental education.
2. Describe the role of teachers and students in environmental evaluation process.
3. Explain the different co-curricular activities used as a tool of evaluation.
4. Explain the evaluation process.

## 6.14 FURTHER READING

Bell, D.; *The Coming of Past Industrial Society*, Arnold Heinman Publication, N. Delhi, 1974.

Bhatia, S.C (ed).; *Papers in Environmental Education*, IUACE, N. Delhi, 1984.

Carson,R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

NOTES

Chakraborty, S.C. (ed); *Value orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Grossland, R.W., & Moor, S.F.D.; *Environmental Studies Project. An Evaluation Report*, Macmillan, London, 1974.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.





NOTES

# UNIT 7 ENVIRONMENT AND QUALITY OF LIFE

**Structure**

7.0 Introduction
7.1 Unit Objectives
7.2 Population Growth
- 7.2.1 Social Impact of Population Growth
- 7.2.2 Ecological Impacts of Population Growth
- 7.2.3 Relationship between Population and Quality of Life

7.3 Biodiversity and its Conservation
- 7.3.1 Levels of Biodiversity
- 7.3.2 Principles of Biodiversity
- 7.3.3 Biogeographical Classification of India
- 7.3.4 Global Biodiversity
- 7.3.5 Threats to Biodiversity
- 7.3.6 Man-Wildlife Conflicts
- 7.3.7 Endangered and Endemic Species of India
- 7.3.8 Conservation of Biodiversity

7.4 Modern Lifestyle and its Impact on Environment
- 7.4.1 Modern Lifestyle: Effect on Environment
- 7.4.2 Values and Ethics of Life
- 7.4.3 Ethics for Life
- 7.4.4 Sustainable Development
- 7.4.5 Balance between Trade and Environmental Policy
- 7.4.6 Fundamentals of Environment and Sustainable Development
- 7.4.7 Urban Problems Related to Energy
- 7.4.8 Water Conservation
- 7.4.9 Resettlement and Rehabilitation Issues
- 7.4.10 Environmental Ethics
- 7.4.11 Climate Change
- 7.4.12 Wasteland Reclamation
- 7.4.13 Strategies for Ensuring Environment-Friendly Business Operations
- 7.4.14 Environmental Legislations
- 7.4.15 Enforcement of Environmental Legislation: Major Issues

7.5 Summary
7.6 Key Terms
7.7 Answers to 'Check Your Progress'
7.8 Questions and Exercises
7.9 Further Reading

## 7.0 INTRODUCTION

In our country, per capita income has not risen in proportion to the national income. Broadly speaking the total income of a country is the sum total of the income of all families belonging to that country. A family would be able to increase its income if every grown up member of the family works hard and that in every family, the number of dependent young members is kept to a reasonable minimum. Rapid population growth has been largely responsible for very slow or meager improvement in the living conditions of an average individual. The living conditions of the people are broadly

indicated by the food they eat, the clothes they wear, the shelter they live in, and the medical and educational facilities that they are able to enjoy. Only a small family is in a better position to provide medical and educational facilities to its members. It is only the healthy and educated members of family who can earn more and are successful in life. Large families not only create problems for themselves but also tend to be more demanding on the community and the state, at least up to such times as their members grow up and are able to earn on their own. People who are convinced of the advantages of small family norm have the courage of conviction and also can take to planning a family as a way of life. The final solution to the population problems lies in accepting and practicing a small family norm by each and every family.

Sustainable development is the method of using resources strategically, so as to retain them for the future. The term was used by the Brundtland Commission which coined what has become the most popular definition of sustainable development as development that 'meets the needs of the present without compromising the ability of future generations to meet their own needs.' In this unit, you will also study about the ecology, ecological balance and about the issues affecting ecological equilibrium.

The unit also deals with problems such as population growth, natural resources and their depletion, industrial and urban population and global warming. Along with a detailed discussion of the topics mentioned, the unit will also discuss the ways to overcome these problems. Sustainable development is the development that meets the needs of the present without jeopardizing the needs of the future generations. In other words, every generation should leave air, water and soil resources pure and unpolluted. Although it is a difficult proposition, it can be achieved through proper environmental management.

Human civilization through their excellence in scientific and technological fields has reached a level where they can produce more of their own kinds by cloning, exploit lands of other planets and receive information from any part of the world. However, at the same time, human civilization is facing the greatest challenge for survival due to the catastrophe created through environmental degradation. To meet the basic requirements of ever increasing population, industrialization is a must, but it results in pollution, environmental degradation and causes ecological imbalances. At the same time, industrial development cannot be sacrificed as it creates job opportunities, raises the standard of living and solves unemployment problems.

In view of this, a balance has to be struck so that development and environmental protection can occur simultaneously. To achieve this goal, sustainable development is the only answer.

## 7.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Define the meaning of quality of life
- Identify relationship between population and quality of life
- Interpret the concept of small family norms
- List the different methods of family planning
- State the concept of biodiversity
- Explain the various types of biodiversity
- Assess the value and importance of biodiversity
- State the remedial measures for preserving the biodiversity
- Discuss the concept of sustainable development
- Diagnose the urban problems related to energy
- Evaluate various initiatives for solutions to problems related to environment
- State various legal initiatives taken by government in the form of various legislations

## 7.2 POPULATION GROWTH

The population of the world has grown at an alarming rate since 1650. The unprecedented increase in population has caused and is still causing rise in individual consumption of food, water, and exploitation of natural resources like land, water, fossil fuels, minerals, vegetation, etc. The combined effects of population growth, consumption, overuse, wastage and misuse of resources has and is still putting an unprecedented strain on the capacity of the Earth to sustain life. The impact of growth of human population on environment in particular is discussed below.

### 7.2.1 Social Impact of Population Growth

Explosive growth in human population causes a number of serious problems like food-scarcity, overcrowding, poverty, increasing consumption of resources, stress on common social facilities, encroachment on monuments, stress on civic services, etc.

#### 1. Food Scarcity

The population growth leading to population explosion causes severe economic disparities and leads to competition for resources, price rise, hunger, malnutrition, and mass starvation.

Due to population growth, the gap between the rich and the poor has also increased. The rich people are exploiting more resources than the poor people. Malnutrition is one of the most common effects of these problems. The poorest people in developing countries do not get adequate calories to develop their health properly. In Ethiopia, almost half of all children under age of 5 suffer from malnutrition. Most poor children and adults suffer from severe vitamin and mineral deficiencies. Failure of senses, mental disorders and damage to vital organs, are some of the problems caused due to malnutrition. As per estimates, from 5 to 20 million people die of starvation across the world, every year.

#### 2. Overcrowding

There is a limited habitable place on the Earth. Overpopulation has caused severe stress on land which has further stressed forests and agricultural areas. People are migrating towards cities in search of jobs and cities are becoming overcrowded. Houses are being constructed on semi-urban and cultivable lands around big cities as there is shortage of space in the cities. Encroachment is happening on government lands like railway platforms, areas around monuments, and parks, etc. Increasing crowd in cities is aggravating the problem of pollution and insanitation leading to the spread of

NOTES

epidemics. Green lands in urban areas and even sea beeches have been reclaimed for housing and industrial purposes.

### 3. Poverty

Conditions of having insufficient resources or income are called as poverty. Poverty is the lack of the basic human needs like food, clothing, housing, drinking water, and health services. Poor people are constantly struggling for shelter and clothing. They often suffer from malnutrition, and diseases.

In developed countries, poverty has caused drug dependence, crime, and mental illness. Overpopulation, unequal distribution of resources, inability to meet the cost of living, inadequate education and employment, degradation of environment, demographic trends and welfare incentives are primary causes of poverty.

### 4. Increasing Consumption

It is a simple truth that more people consume more food, wear more clothes, drink more water, need more houses to live, need more medicines for cure, make more noise, create more pollution, generate more wastes, etc.

Some countries of the world have nearly stabilized their population but their lifestyle has become consumption based, for example, United States of America. Though, it is not overpopulated, it consumes about 40 per cent of resources of the world alone and produces not less than 21 per cent of the world's carbon dioxide which is a greenhouse gas.

It has been observed by ecologists that the powerful people and developed nations consume more resources than weak and poor people and developing or under developing countries. Thus, increase in the rate of consumption at one end is causing an increase in hunger and crime at the other end. Thus, the population growth and the changing pattern of consumption are responsible for the severe stress on environment.

### 5. Encroachment on Monuments

A monument is a building, column or statue of historical importance built-in the past. People who migrate from rural areas and work in cities often face difficulties and most of them are homeless. They take shelter on pavements, abandoned buildings and on spaces left around historical monuments. Gradually, they build temporary houses on these places and keep their families there. Eventually a colony is formed. This condition is the by-product of the explosion of population.

### 6. Stress on Common Social Facilities

Facilities are required both at home front and on social front. More people mean more use of the available facilities. Due to limitation of facilities, there may be a great rush and competition for the facilities that are available causing severe stress on them. Community halls, bus stops, railway junctions, parks, play grounds, hospitals and even roads are some common social facilities that are facing heavy stress due to population explosion. There is heavy traffic on roads round the clock. All these social facilities are often heavily polluted due to careless practices by people.

### 7. Stress on Common Civic Services

Services provided by municipalities or municipal corporations to civilians are called civic services. These services include cleanliness, water supply, waste disposal, maintenance of drainage systems, community healthcare, care of animals, basic education, etc.

Over population has caused severe stress on civic services creating overload of work on bodies providing civic services. Due to this the people responsible are unable to perform their duties properly. The need and deprivation has made people lose their civic sense.

## 7.2.2 Ecological Impacts of Population Growth

The scientific study of inter-relationships among organisms and between organisms—living and non-living—is called as Ecology. Therefore, ecology relates to environment and ecological impacts of population on environment. The ecological impacts of population growth include impacts of population growth on physical and biological components of the natural environment.

### 1. Impact of population growth on physical environment

Physical environment means non-living environment or the land, air, water, soil and minerals. The utilization, overuse and misuse of physical resources have increased due to the growth of human population. More population means more mouths to feed which requires more agricultural production. More agricultural production requires two things – (i) more cultivable land, and (ii) advanced agriculture. Cultivable land has been made available by clearing forests and by reclaiming wet lands, ponds and green belts. Advanced agriculture requires utilization of more water, more fertilizers and more pesticides. Fertilizers and pesticides make the soil infertile. Clearing of forests has its own serious impacts and thereby causing imbalance in the environment.

More population means more space for house construction and availability of more consumer goods. Population growth requires more means of transport, more consumption of fossil fuels and more pollution of air, land and water. Thus growth of population leads to pollution of air, land and water. Different types of pollutions are seriously affecting the biological environment.

### 2. Impact of population growth on biological environment

The population explosion has already caused and is still causing serious impact on the global environment. As for biological environment, human population has stressed most of the biological systems, comprising flora and fauna and biological diversity.

Since most of the components of the physical environment are under serious threat due to population explosion, all the biological components are bound to suffer. Hence, most of the natural processes have been seriously altered which has caused serious imbalances in the ecosystems. These imbalances are explained briefly below:

- For expanding cultivable land, forests have been cleared on large scales. Illegal timber trade by timber mafias and local pressure for firewood have further depleted the forest resources. These destructive activities of human beings have had an adverse affect on the wild animals and have led to extinction of some wildlife in the process. Forests have also been cleared for setting up of industries and for urbanisation which has affected the habitats of a variety of birds and animals. There are other reasons of forest destruction also. Some of those reasons are forest fires and *jhoom* cultivation. *Jhoom* cultivation is the practice of growing crops after burning forest vegetation. It is also known as the *slash*





NOTES

NOTES

*and burn cultivation*. Intensive agriculture and mining have also caused large-scale destruction of habitats.

- Frequent water crises in many parts of the world caused failure of agriculture leading to hunger and starvation. Vast varieties of plants and animals have been killed due to water crises. Water crises often lead to migration of people and animals to other places which in turn cause overcrowding.
- Poaching and killing of wild animals and illegal trade of body parts to earn money have also caused extinction of several species of animals.
- Generation of waste due to increasing consumer culture and population explosion is causing spread of serious epidemics and deaths in many parts of the world.

Habitat destruction and overexploitation of resources induced by population growth has caused serious depletion of biodiversity in many parts of the world and its depletion causes serious losses of a number of factors that are vital for proper functioning of the ecosystems.

### Impact of Population Growth on India

India is the best country to study the consequences of over population. Geometric growth in population has pushed our country into population explosion leading to number of serious consequences. Some of them are:

- Decreased availability of food and clothing
- Decreased per capita food availability despite phenomenal increase in their production
- Decreased per capita GMP and reduced standard of living due to ever increasing population
- Increased pressure on resources like land, water, natural forests, animals etc. leading to many far reaching effects like:
  - Fragmentation of land below the economic level.
  - Acute shortage of drinking and irrigation water.
  - Denudation of forest (Deforestation) to increase the area under agriculture.
  - Pollution of water, land, food materials etc.
- Urbanization beyond a healthy developmental limit as more rural people shift to towns/cities in search of better work and earning. Urbanization has led to many problems such as
  - Increased housing problems in cities / towns.
  - Very high vehicular movement in cities / towns leading to accidents, pollution, etc.
  - Serious problem connected to vast urban waste generation and its disposal.
  - Serious drinking water shortages.
  - Unending demands for civic amenities like roads, transport, markets, etc.
- Unemployment problems of serious dimension both in urban and rural areas leading to reduced per capita earning, and poverty
- Hunger deaths - because of reduced per capita food availability and poor distribution of food
- Acute shortage of medical facilities including qualified doctors, medicines, dispensaries, modern health care facilities etc - due to high population
- Shortage of education facilities including schools, colleges, qualified teachers
- Serious shortage of power and problems connected with its distribution
- Increased inflation
- Increased borrowings from international organizations
- Reduced care of young ones leading to increased child health problems as well as vulnerability of children to many diseases
- Reduced health care to mothers
- Difficulties encountered in implementation of all national and state developmental programmes
- Increased government expenditure
- Increased density of population

In India, over population has engulfed almost all our achievements in industrial growth, agricultural production, supporting services like medical care, housing, transport, education, and banking. It has put serious pressures on every sector of our economy and every section of society. Almost all our national problems can be traced back to have their roots in overgrowing population.

## 7.2.3 Relationship between Population and Quality of Life

Slower the population growth, the smaller the population and consequently better the quality of life. An over-crowded nation cannot provide adequate food, shelter, education, employment, health, hygiene and resources. These affect the economical status of the nation. There are some reasons by which quality of life is not maintained well.

1. **Poverty and illiteracy:** Poverty accompanied by malnutrition, unemployment, low status of woman education, limited sources of social and health services contribute to high level of fertility, morbidity, mortality as well as low level of productivity. It leads to high rate of population growth. High rate of population growth decreases the ability to use resources properly and consequently quality of life deteriorates.
2. **Physical, social, health environment:** Excessive population growth puts extra pressure on physical environment, e.g., air, water, resources, fuel, transport. It also puts pressure on social environment in which large families in limited place and poor bonding fight for money and property that negatively affects on quality of life. The contamination of air, water and food by excessive population again damages the healthy environment and quality of life.
3. **Young generation:** A large proportion of young generation in a population needs more resources for health education, employment and facilities to survive. In the absence of supply of these things, youth is diverting towards exploitation, social abuse, crimes, corruption and ignorance of responsibility and values. To save our youth from these evils we have to control our population.
4. **Old age people:** The steady increase of old age groups or ageing of population poses serious economic and social challenges to all the societies. The quality of life depends on the factors which affect the old age population. A few of them are:

NOTES

(i) systems of health care
(ii) systems of economic and social security
(iii) support system for their caring in family
(iv) self reliance and participation in decision-making
(v) good opportunities and care for challenged or disabled old persons
(vi) education and health policies
(vii) economical security

These factors make a good structure of population and better quality of life.

### Check Your Progress

1. What are the social impacts of population growth?
2. State the primary causes of poverty.
3. Fill in the blanks:
   (i) Due to population growth, the gap between the rich and the poor has also _____.
   (ii) Jhoom cultivation is also known as _____.
   (iii) The scientific study of inter-relationships among organisms and between organisms- living and non-living-is called as_____.

## 7.3 BIODIVERSITY AND ITS CONSERVATION

The earth holds a vast variety of living organisms, which includes different kinds of plants, animals, insects, and microorganisms. It has an immense variety of habitats and ecosystems. The total diversity and variability of living things and of the system of which they are a part is generally defined as biological diversity, i.e. the total variability of life on Earth. Biodiversity includes diversity within species, between species and of ecosystems.

Perception of biodiversity varies widely among biologists, sociologists, lawyers, naturalists, conservationists, ethno biologists and so on. Thus, biodiversity issues have been a unifying force among people of various professions and pursuits.

Conservation is the protection, preservation, management, or restoration of wildlife and natural resources such as forests and water. Through the conservation of biodiversity, the survival of many species and habitats which are threatened due to human activities can be ensured. Other reasons for conserving biodiversity include securing valuable natural resources for future generations and protecting the functions of the eco-system.

### 7.3.1 Levels of Biodiversity

Biodiversity can be studied at many levels.

**1. Genetic biodiversity**

It is the basic source of biodiversity. Genes found in organisms can form enormous number of combinations, each of which gives rise to some variability. Genes are the basic units of hereditary information, transmitted from one generation to other. When the genes within the same species show different versions, due to new combinations, it is called genetic variability. For example, all rice varieties belong to the species Oryza sativa, but there are thousands of wild and cultivated varieties of rice which show variations at the genetic level and differ in their colour, size, shape, aroma and nutrient content of the grain. This is genetic diversity of rice. Genetic biodiversity means the variation of genes within a species. In a species, each variety has its own genes or genetic make-up. Diversity of genes within a species increases its ability to adapt to disease, pollution and other changes in environment. When a variety of a species is destroyed, genetic diversity gets diminished.

**2. Species biodiversity**

This is the variability found within the population of a species or between different species of a community. It represents broadly the species richness and their abundance in a community. Till now, only about 1.5 million living and 300000 fossil species have been actually described and given scientific names. It is quite likely that a large fraction of these species may have become extinct even before they were discovered and enlisted. Species biodiversity means a variety of species within a region. Such diversity can be measured on the basis of species in a region. More the species biodiversity means more the biological wealth.

**3. Ecosystem biodiversity**

Ecosystem biodiversity is the diversity that shows variations in ecological niches, nutrient cycling, tropic structure, food webs, etc. There is variation in physical parameters like moisture, temperature, altitude and precipitation. Thus, there is tremendous variation within the ecosystems along these gradients.

Variations in trees and wildlife found in forests are due to these physical factors. Ecosystem diversity is of great importance and should be kept intact. This diversity has developed over millions of years of evolution. Destruction of this diversity will result in ecological imbalance. It is impossible to replace the diversity of one ecosystem with that of another. Coniferous trees of boreal forests cannot take up the function of the trees of tropical deciduous forest lands and vice versa as this is the result of the prevailing environmental condition of that particular area with well regulated ecological balance.

### 7.3.2 Principles of Biodiversity

Biodiversity in terms of its commercial utility, ecological value, social and aesthetic value has enormous importance. We are benefited by other organisms in many different ways. Sometimes, we come to know and appreciate the value of an organism only after it is lost from this earth. All organisms have their importance and role to play in keeping the ecological. The multiple principles of biodiversity are classified as follows:

**1. Consumptive use value**

These include direct use values where the biodiversity product can be harvested and consumed directly, e.g., fuel, food, drugs and fibre.

**Food:** A large number of wild plants and shrubs are consumed by human beings as food. Many edible plants species have been taken up for farming. Agricultural scientists develop new hardy strains of different plant species that are available in the wild. A

large number of wild animals are also our sources of food.

**Drugs and medicines:** About 75 per cent of the world's population depends on plants or plant extracts for medicines. For example, penicillin drug used as an antibiotic is derived from a fungus called penicillin and quinine, the cure for malaria is obtained from the bark of cinchona tree. Recently, vinblastin and vincristine, two anti-cancer drugs, have been obtained from periwinkle (catharanthus) plant, which possesses anti-cancer alkaloids.

**Fuel:** Our forests have been a big supplier of fuel wood. Fossil fuels like coal, petroleum and natural gas are products of fossilized biodiversity. Firewood collected by people is not normally marketed, but are directly used by tribals and local villagers; hence, falls under constructive value.

### 2. Productive use values

These are the commercially usable values that can be marketed and sold. These products can range from lumber or wild gene resources used by scientists for introducing desirable traits in crops and domesticated animals or animal products like tusks of elephants, musk from musk deer, silk from silkworm, wool from sheep, and lac from lac insects. Many industries are dependent on the productive use of values of biodiversity like paper and pulp industry, plywood industry, railway sleeper industry, silk industry, and textile industry.

### 3. Social value

These are the values associated with the social life, customs, religion and psycho spiritual aspects of the people. Many plants like *tulsi, peepal* and lotus are considered holy and sacred in our country. The leaves, fruits or flowers of some particular plants are used in worship or the sometimes the plant itself is worshipped, like the plant of *tulsi*. The tribal people have close links with the wildlife in the forest. Their social life, songs, dances and customs are closely woven around the wildlife. Animals like cow, snake, peacock and owl also have a significant place in our psycho-spiritual arena and therefore are of social importance. Thus, biodiversity has distinct social value, attached with different societies.

### 4. Ethical value

Ethical value is also sometimes known as existence value and is based on the concept of 'live and let live'. If we must protect all biodiversity as biodiversity is valuable and important for human race to survive.

Ethical value means that we may or may not use a species, but are happy with the fact that they exist in the nature. One feels sorry when any particular species like 'passenger pigeon' or 'dodo' become extinct. This means, there is an ethical value or existence value attached to each species.

### 5. Aesthetic value

Great aesthetic value is attached to biodiversity. None of us would like to visit vast stretches of barren lands with no signs of visible life. Most people like to spend their time in the lapse of nature and in wilderness. They enjoy the aesthetic value of biodiversity. This type of tourism has come to be known as ecotourism. The concept 'willingness to pay' on such ecotourism gives us a monetary estimate for aesthetic





value of biodiversity.

### 6. Option value

These values include the potential of biodiversity that are presently unknown and need to be explored. It is the knowledge that there are biological resources that may prove to be effective some day in future. Option value also includes the values, in terms of the option to visit areas where a variety of flora and fauna, or specifically some endemic, rare or endangered species exist.

### 7. Ecosystem service value

This refers to the services that can be rendered to preserve the ecosystems like maintenance of soil fertility, prevention of soil erosion, prevention of floods, fixation of nitrogen, cycling of water, cycling of nutrients, pollutant absorption and reduction of the threat of global warming, etc. Different categories of biodiversity value indicate that there is enormous potential in ecosystem, species and genetic diversity and a decline in biodiversity will lead to huge economic, ecological and socio- cultural losses.

**Case Exhibit: Rampant Development May Spell Doom for Western Ghats**

The partitioning of about one-third of natural landscapes and throwing open of two-thirds of so-called cultural landscapes to development will eventually lead to fragmentation and desertification of the Western Ghats, said ecologist Madhav Gadgil. Gadgil sounded a warning that the approach of Krishnaswamy Kasturirangan's high-level working group (HLWG) to reject a graded approach with a major role for grass-roots-level inputs for safeguarding the ecologically sensitive Western Ghats, as suggested by the Western Ghats ecology expert (WGEEP) panel would be perilous for the future of the world heritage site. 'This (partitioning and opening to development) amounts to attempts to maintain oases of diversity in a desert of ecological devastation. Ecology teaches us that such fragmentation would lead, sooner, rather than later, to the desert overwhelming the oases,' said Gadgil.

Gadgil's WGEEP had submitted a report on the protection of the Western Ghats in August 30, 2011, which the central government kept under wraps till it was put in the public domain by the high court of Bombay at Goa on May 24, 2012, in connection with a public interest petition. The central government formed the Kasturirangan panel to advise it on the Western Ghats ecology expert recommendations. The high-level working group report was released on April 17. The 1600km-long Western Ghats has two distinct landscapes, natural ones with protected areas and reserve forests and cultural landscapes in the foothills. 'There is very little else and the high-level working group suggested strengthening of government machinery to protect the natural landscapes,' Gadgil told TOI. But the ecologist, who wrote to Kasturirangan, said the safeguarding by guards with guns may not work, as the high-level working group recommended portioning of the natural landscape, and it will lead to degradation. Gadgil said opening up cultural landscapes to development has spawned scams like the 35,000 crore illegal mining in Goa. 'It is vital to think of the maintenance of habitat continuity, and of an ecologically and socially-friendly matrix to ensure long-term conservation of biodiversity rich areas, and this is what we had proposed,' Gadgil stated in his letter. Gadgil pointed out that freshwater biodiversity is far more threatened than forest biodiversity. 'This lies largely in cultural landscapes in foothills,' he said. The Western Ghats ecology expert panel chief accused the government of proposing to set up more polluting industries in Ratnagiri and suppressing its own zonal atlas for citing of industries.

NOTES

A polluting industry in Ratnagiri ravaged fisheries, rendering 20,000 people jobless, while only 11,000 benefitted from it. Gadgil alleged that the government adopted a passive approach to the pollution issue, but invoked police powers to suppress the peaceful protests against pollution on as many as 180 out of 600 days in 2007-09.

'But the high-level working group report shockingly dismisses democratic devolution of decision-making powers, remarking that local communities can have no role in economic decisions,' he added.

***Source:*** http://articles.timesofindia.indiatimes.com/2013-05-18/goa/39353711_1_ western-ghats-hlwg-madhav-gadgil

### 7.3.3 Biogeographical Classification of India

India has different types of climate and topography in different parts of the country and these variations have induced enormous variability in flora and fauna. India has a rich heritage of biological diversity and occupies the tenth position among the plant rich nations of the world.

It is very important to study the distribution, evolution, dispersal and environmental relationship of plants and animals in time and space. There are ten different bio-geographic habitats in India.

1. Trans-Himalayan – Upper regions
2. Himalayan – North-West Himalayas, West, Central and East Himalayas
3. Desert – Kutch, Thar and Ladakh
4. Semi-Arid – Central India, Gujarat-Rajwara
5. Western Ghats – Malabar Coast, Western Ghat Mountains
6. Deccan Peninsula – Deccan Plateau South, Central, Eastern, Chhota Nagpur
7. Gangetic Plain – Upper Gangetic Plain, Lower Gangetic Plain
8. North-East India – Brahmaputra Valley, North Eastern Hills
9. Islands – Andaman Islands, Nicobar Islands, Laskhadweep, etc.
10. Coasts – West Coast and East Coast

**Case Exhibit: Indian Tiger Faces Extinction for Lack of DNA Variety**

As researchers have previously warned, Tigers in India may be a little too close for comfort — when it comes to their DNA, anyway. A new study from Cardiff University has researchers concerned that Indian tigers face extinction because of a lack of 'genetic diversity.' Partnering with India's National Center for Biological Sciences, researchers compared current DNA samples from tigers on the Indian subcontinent to genetic data obtained during the time of the British Raj, a period of British rule in India from 1858 to 1947. They found that 93 percent of the tiger DNA variants from that historical period are no longer present in the current tiger population. 'This is due to loss of habitat and habitat fragmentation, meaning lower population sizes, and the prevention of tigers from dispersing as they once would have, which means their gene pool is no longer mixing across the subcontinent,' Mike Bruford, a professor at the Cardiff School of Biosciences, explained to the BBC.

The lack of genetic diversity in Indian tigers presents an obvious 'red flag' for conservationists, Bruford and his team note in the study. Genetic variation can be crucial for species survival and adaptation to environmental change, and its judicious management is now required in the Convention on Biological Diversity's 2020 targets. Although recent studies demonstrate that Indian tigers retain the highest proportion of the specie's genetic variation, this study demonstrates that some components of that genetic variation have been lost, and what remains is now subdivided. Though conservation efforts — from protected reserves to endeavors to mitigate human-tiger conflict — are currently in place, researchers state that 'it is critical to maintain within-population variation, as well as increasing population connectivity' on a large scale. While the study's findings are startling, researchers warned in 2011 that poor genetic diversity may be a threat to the tiger population. That year, a Wildlife Institute of India study revealed a loss of many alleles — an alternate form of a gene, which can cause varying characteristics across a species — among tigers in the Ranthambore Tiger Reserve. At the time, investigator S.P. Goyal attributed the loss to 'an isolated population without any genetic exchange,' according to the *Times News Network*.

The tiger is classified as endangered on the International Union for Conservation of Nature's Red List of Threatened Species. According to the World Wildlife Fund, the tiger population is estimated to be as low as 3,200, with as few as 1,400 tigers in India.

***Source:*** http://www.huffingtonpost.com/2013/05/15/indian-tigers-geneticdiv_n_ 3280050.html?utm_hp_ref=green

### 7.3.4 Global Biodiversity

The United Nations Conference on Environment and Development at Rio in 1992, put biological diversity on the international agenda by signing the Convention on Biological Diversity (CBD). This convention addresses many issues ranging from forests, agriculture to Intellectual Property Rights (IPRs). India is a signatory to CBD and ratified it in 1993. The Government of India has finalized the National Policy and Action Strategy for Biodiversity. A legislation was finalized and the Indian Parliament passed the Biodiversity Bill in 2002. The objective of the convention was 'the conservation of biological diversity, the sustainable use of its components and equitable sharing of benefits arising out of the utilization of genetic resources.' It also covered the ecological, economic and social aspects of biodiversity.

The success of the convention can be evaluated in two main ways:

The first one is by the analysis of the changes in components of biodiversity (i.e., species and ecosystems) and by measuring the effectiveness of the measures taken to implement the convention. According to the Worldwide Fund for Nature, scientists have identified about 1.4 million species. Of these, around 1.03 million are animals and 2,48,000 are higher plants. But, human knowledge of the world's biodiversity is still not complete. Higher plants have also been fairly well studied, but it is possible that 15 per cent more may still be discovered. Numerous insects, invertebrates, lower plants and micro-organisms exist, but have yet to be identified and described. One recent estimate put this figure as high as 30 million.

Human impact on nature has reached such high proportions that the world is today witnessing an extraordinary rate in loss of species. Many thousands of species will disappear even before they are found and described by biologists. In 1988, the International Union for Conservation of Nature (IUCN) listed 4,589 threatened animals. Scientists at the Kew Gardens in Britain listed around 20,000 plant species as threatened. According to an estimate by the IUCN's Threatened Plants Unit, by the year 2050 up to 60,000 plant species will become extinct or threatened. These estimates show that





NOTES

NOTES

the current rate of extinction is at least 25,000 times greater than the extinction that took place during evolutionary times. The rate of extinction of mammals alone has risen from one species every five years in the seventeenth century to one every two years in the twentieth century.

### Biological Diversity at National Level

Every country is characterized by its own biodiversity which mainly depends on the climate. India has a rich biological diversity of flora and fauna. Overall six per cent of the global species are found in India. The total number of living species identified in India country is 1,50,000. Out of the total 25 biodiversity hot spots of the world, India possesses two— one in the northeast region and one in the Western Ghats. Indian is also one of the 12 mega-biodiversity countries in the world.

### India as a Mega-Diversity Nation

India is one of the twelve mega-diversity countries in the world. The Ministry of Environment and Forests, Govt. of India (2000), records 47,000 species of plants and 81,000 species of animals which is about 7 per cent and 6.5 per cent respectively of global flora and fauna. These major groups of species include endemism, centre of origin, marine diversity, etc. A large proportion of the Indian biodiversity is still unexplored. Due to its diverse climatic conditions, there is a complete spectrum of biodiversity in our country.

## 7.3.5 Threats to Biodiversity

Extinction or elimination of a species is a natural process of evolution. The rate of loss of species in the geologic past has been a slow process but the process of extinction has become particularly fast in the recent years of civilization. In the recent times, the human impact has been so severe that thousands of species and varieties are becoming extinct annually.

The following are the major causes and issues related to threats to biodiversity:

### Loss of Habitat

Destruction and loss of natural habitat is the single largest cause of losing biodiversity. Billions of hectares of forests and grasslands have been converted into agricultural land, pastures, settlement areas or for development projects. These forests and grasslands were the homes of thousands of species, which perished due to loss of their natural habitat. There has been severe damage to the wetlands which were thought to be useless ecosystems. They are getting destroyed due to draining, filling and pollution causing huge loss of biodiversity.

The habitat is divided into small and scattered patches, so that the complete loss of habitat can be put at bay. This phenomenon is known as habitat fragmentation. There are many wildlife species such as bears and large cats that require large territories to live but are threatened as they breed only in the interiors of the forests. Marine diversity is also under serious threat as there is due to large-scale destruction of the breeding and feeding grounds of fish and other species.

### Poaching

Illegal trade of wildlife products by killing prohibited endangered animals is another threat to the wildlife. The rich countries in Europe and North America and some affluent countries in Asia like Japan, Taiwan and Hong Kong are the major importers of wildlife products or wildlife itself. The trading of such wildlife products is highly profitable for the poachers who smuggle them to other countries mediated through mafia.





NOTES

## 7.3.6 Man-Wildlife Conflicts

As we know that it is very important to preserve and protect wildlife but sometimes we come across situations when wildlife causes immense damage and danger to man. Under such conditions it becomes difficult for the forest department to pacify and gain local support for wildlife conservation from the people or villages that are affected by the wildlife.

Instances of man-animal conflicts come to limelight from several states in our country time and again. In Sambalpur, Odisha, 195 humans were killed in the recent past by elephants. In retaliation, the villagers killed ninety-five elephants in the border region of Kote-Chamarajanagar belt in Mysore. The conflict in this region has arisen because of massive damage done by the elephants to the cotton and sugarcane crops. The elephants are electrocuted by the villagers or blown off with explosives when they intrude into the fields. In fact, more killings are done by locals than by poachers. In early 2004, a man-eating tiger was reported to have killed sixteen Nepalese people and a four year old child inside the Royal Chitwan National Park, 240 km South-west of Kathmandu. Similar incidents were reported near Sanjay Gandhi National Park, Borivali, Mumbai where similar incidents of human killings, especially of small children was reported.

### Causes of Man-Animal Conflicts

- Dwindling habitats of tigers, elephants, rhinos and bears due to shrinking forests cover are compelled to move outside the forests. Human encroachment into the forest areas has rendered all forest living animals to trespass the borders of human civilizations. This is because the conflicts between man and the wildlife have increased since it is an issue of survival of both.
- Weak and injured animals have a tendency to attack man. At times, a tigress might attack the human if she feels that her cubs are in danger. It is very difficult to trace a man-eating tiger and in the process many innocent tigers get killed.
- Earlier, the forest department used to cultivate crops like paddy, and sugarcane within the sanctuaries as they are a favourite of elephants. Due to lack of such practices the animals tend to move out of the forest in search of food. It may be noted that, one adult elephant needs 2 quintals of green fodder and 150 kg of clean water daily and if it is not available, the animal will leave its habitat in search of it.
- Very often, the villagers put electric wiring around their ripe crop fields. The elephants get injured, suffer pain and may then turn violent.
- Disappearance and disruption of wildlife corridor due to development has given the animals a chance to attack humans.
- The cash compensation paid by the government in lieu of the damage caused to the crops by the wild animals is not enough. The affected farmer, therefore, gets revengeful and kills the wild animals.

**Remedial Measures to Curb the Conflict**

- Tiger Conservation Project (TCP) has made provisions of vehicles, tranquillizer guns, binoculars and radio sets, etc., to deal with any imminent danger tactfully.
- There should be adequate crop compensation and cattle compensation schemes along with substantial cash compensation for loss of human life.
- Solar-powered fencing should be provided along with electric current proof trenches to prevent animals from straying into the agricultural fields.
- Cropping pattern should be changed near the forest borders and adequate amount of food and water should be made available to the animals.
- Wildlife corridors should be provided for mass migration of big animals during unfavourable periods.
- Rituals such as wild animal hunting like 'Akhand Shikar', practiced in Similipal Sanctuary, Odisha should be banned.

### 7.3.7 Endangered and Endemic Species of India

India is home to a number of species that are facing various degrees of extinction. The IUCN Red List of Threatened Animals is internationally recognized as the list that categorizes the status of globally threatened animal species. Based on the numbers and the level of threat, the species have been classified into the following groups:

- **Critically endangered**

  Animals in this category face the highest risk. Critically endangered means that a species' numbers have decreased, or will decrease, by 80 per cent within three generations. There are 18 critically endangered animal species in India, including the Ganges shark, Himalayan wolf, Indian vulture and pygmy hog.

- **Endangered**

  A species is said to be endangered when its population is at risk of becoming extinct because it is either few in numbers, or threatened by changing environmental or predation parameters. There are 54 endangered species in India, including Asiatic lion, chiru (Tibetan antelope), Ganges dolphin, Indian rhinoceros, Indian elephant, Royal Bengal tiger, Nilgiri tahr, Olive Ridley turtle, red turtle, snow leopard, etc.

- **Vulnerable**

  A vulnerable species is one which has been categorized as likely to become endangered unless the circumstances threatening its survival and reproduction improve.

- **Threatened**

  Threatened species are any species (including animals, plants, fungi, etc.) which are vulnerable to endangerment in the near future. In addition to the animals, nearly 450 plant species have been identified in the categories of endangered.

India is also rich in endemic species. Endemic species are those that are found in specific locations and nowhere else in the world. The biodiversity hotspots in India are rich in endemic species. The Western Ghats are the richest in endemic species, with about 62 per cent of the known amphibian species and nearly 50 per cent of the lizards of India being endemic to this region. There are 42 species of endemic birds in India, out of which 35 are found in the Western Ghats. About 30 per cent of the world's recorded flora is endemic to India. Most of these endemic species are found in the Himalayas and adjoining regions and in the Western Ghats. Endemic mammals of India include lion-tailed macaque, Nilgiri langur, brown palm civet and Nilgiri tahr.





### 7.3.8 Conservation of Biodiversity

Due to the tremendous importance of biodiversity it is considered an asset of a region or a nation. Due to its multiple advantages of commercial value, consumption value, medicinal value, social, cultural, religious and optional values, biodiversity needs to be conserved. The need for its protection and conservation has become more important due to overexploitation and the subsequent depletion. There are two types of methods of conservation of biodiversity:

- Ex-situ
- In situ

Ex-situ conservation means off-site protection of biodiversity. It is the process of protecting an endangered species of plant or animal by removing it from an unsafe or threatened habitat and placing it under human care. While Ex-situ conservation comprises some of the oldest and best-known techniques known to and created by man, it also involves newer techniques like laboratory method.

**Ex-situ conservation**

Creation of zoos, botanical gardens, culture collection centres are the most conventional and traditional methods of ex-situ conservation, all of which house and protect specimens for breeding and reproduction of wild life animals and plants. Endangered plants may also be preserved in part in such botanical garden through seed banks and germ plasma banks. Endangered animals are preserved using similar techniques through preservation in gene bank. In the gene banks, which consist of cryogenic facilities, live sperms, eggs or embryos can be stored. Some countries have established frozen zoos to store such samples from more than 366 species, which consist of mammals, reptiles and birds.

**Drawbacks of ex-situ conservation:** Ex-situ conservation although is helpful to man's effort to sustain and protect biodiversity, is rarely enough to save a species from extinction. It can be used as a last resort or as a supplement to in-situ conservation. It cannot re-create a habitat. Furthermore, ex-situ conservation techniques are often costly natural.

**In-situ conservation**

In-situ conservation means to conserve the biodiversity within the habitat and on site. It deals with the protection of an extinct species of plant or animal in its natural habitat, either by protecting or preventing the habitat itself from getting exhausted. The benefit of in-situ conservation is that it maintains the natural surroundings of the population of the animals or plant in its natural distinctive property. In situ conservation should be preferred to ex-situ conservation, the latter opted only in case where in situ conservation is either too difficult or impossible. Wildlife conservation is mostly based on in situ conservation through protection and recreation of the wildlife habitat.

### Case Exhibit: Dindigul's Forests Fall to Mafia's Axe

The Sirumalai reserve forest, a rare wildlife habitat and home to rare species of medicinal plants, is being denuded of its trees for large scale cultivation. Sirumalai also caters to the irrigation needs of scores of villages in the Dindigul union. It feeds a network of check dams that service villages dotting the foothills that stretch between. Vellode and Vadipatti. The farmers here have been engaged for decades in horticulture and floriculture. Sirumalai, a hill station criss-crossed by private estates, has traditionally relied on streams and other natural resources for its water supply. The sinking of bore wells was banned. Now, the State Government has sanctioned more than 20 bore wells to meet the drinking water needs of the local people. The panchayat administration has already started sinking bore wells at 20 points in Pazahiyur, Sirumalai Pudhur, Thenmalai and other populated areas. This would set a wrong precedent and tacitly permit private estates to sink bore wells illegally for their irrigation needs, local people fear.

It would have an adverse impact on the environment. Bore wells would drain the forest streams and storage in ponds. Surface water would vanish. They would disrupt and divert the natural flow of ground water, creating dry fractures in the earth. The hill station may become vulnerable to massive landslides and, in the long run, to earth quakes, cautions R. Rajasekaran, former Assistant Conservator of Forests (Retired).

The hill would lose its core strength. Vast prairies would turn dry, creating food shortage for animals. With no food and water available within the core zone, wildlife would migrate to villages and invade farmlands. Ultimately, the biodiversity would be disturbed, he adds.

The population of the Indian Gaur is high here at present. With no predator around, its population has increased manifold. Already, the Gaur has started climbing down to Natham Road, 20 km away, in search of forage and water during summer. Besides, the forest has large numbers of wild dog, bear and deer, says A. Kumara Menon, former Ranger of Sirumalai Hills.

Forest officials say there is no proper record of the tree wealth in Sirumalai. While environmentalists fear they are fighting a losing battle to preserve the reserve forest.

The Tamil Nadu Green Movement has filed a petition in the Madurai Bench of the Madras High Court seeking a direction to protect the Sirumalai forests. In a landmark judgment, the Bench had directed the Forest Department to identify and demarcate the forest land and forest reserve in Sirumalai and remove all encroachments within the reserve forest. With timber smugglers having laid mud roads inside the reserve forest to transport felled trees, the court also directed forest officials to close off all illegal roads and introduce an eight hour shift at a forest check post. But forest officials did not take the court directions very seriously, said S. Jayachandran, Joint Secretary, Tamil Nadu Green Movement.

Timber smuggling continues unabated. Smugglers use the permits issued for cutting trees in private patta land to fell trees in the reserve forest, says a senior forest official. Now the groundwater level has dropped and rainfall is deficient, he observes. Sirumalai is famous for its hill banana, jack fruit and lemon varieties. Sadly, the areas under cultivation are fast shrinking. In 2010, the State Government led by the DMK party had identified various sites in the state to establish five genetic heritage gardens. Sirumalai was identified for setting up the Mullai genetic garden. 500 acres of land was set aside by the government, under the control of the Horticulture Department. However, as the government changed, the proposal was suspended. It was planned to set up the Kurinji, Marudham, Neidhal and Palai genetic gardens in Chakkotai in Thanjavur, Thirukkadaiyur in Nagapattinam and Pattinamkathan village in Ramanathapuram districts. Says N. Arun Shankar, Secretary of the Palni Hill Conservation Council, 'We should realize how important the Sirumalai and Kodaikanal hills are for Dindigul for clean air that keeps the towns cool and ensure quality of life.'

*Source:* http://www.thehindu.com/news/national/tamil-nadu/dindiguls-forestsfall-to-mafias-axe/article4717543.ece





## Check Your Progress

4. _____ are the basic unit of hereditary information, transmitted from one generation to other.
5. Species biodiversity is the variability found within the population of a species or between different species of a community. (True/False)
6. What do you mean by genetic variability?
7. Give a brief note on the biological diversity of India.
8. How did the Convention of Biological Diversity, 1992 define biodiversity?
9. What are the three levels of biodiversity?
10. What is the ethical value of biodiversity?
11. What are the two hot spots of biodiversity in India?

## 7.4 MODERN LIFESTYLE AND ITS IMPACT ON ENVIRONMENT

The present condition of our society is changing rapidly with new innovations in technologies and modern means of communication. Every individual is in cut throat competition and material achievement has transformed human beings to mechanical robots.

The most serious problems faced by our nation and society are as follows:

- Rapid degradation of our cultural heritage.
- Lucrative salaries cannot provide satisfaction rather it creates frustration and unhappiness.
- High status and position in society is desired by every individual and causes lack of mental peace.
- Ills of society like embezzlement of public fund, molestation, distortion, robbery and corruption has been labelled on population growth.
- Erosion of social, moral, cultural and political values.
- Race of competition for money, position, standards, desires.
- People are acquainted with their rights but not for their duties.
- The self-centeredness, unlimited greed, bribery, corruption, violence, distortion, frustration are the evils of modern society.
- Modernization in sense of dressing, behaving, communication, customs and tradition, living habits, diets, education and jobs, celebration of festivals and occasions have pushed the traditional values into the background and many new ideas are contending to fill the gap.

NOTES

- Industrialization and advance technologies in agriculture. The change in the modern system brings new perceptions, ideologies, attitudes and behaviour that affects lifestyle.
- Adaptation of western culture and late night parties, drinking and drug abuse, legality of homosexuality are trying to disintegrate the moral values.
- Excessive growth of population directly affects the living standards of people. Basic amenities and requirement of energy resource, housing facilities, and means of transport are demanded hugely, it becomes difficult to satisfy such demands of overly populated cities which thus, leads to crime and conflicts in urban and semi-urban areas.
- In absence of adequate means of survival in the villages and small towns, people are migrating to metropolitan and cosmopolitan cities to earn their livelihood. This creates ambiguous population growth in these cities. Since cities lack enough infrastructure to accommodate such migrants, this results in slum, beggary and crimes.
- Long working hours causes fatigue, mental pressure, anxiety, frustration and anger among individual which affects their family. This also adversely affects the development and growth of their kids.
- Job opportunities and liberalism develop a concept of nuclear family in young generation. This creates a gap not only between places but also between people.
- From the point of view of culture, globalization produces two conflicting occurrences.
    - o **Standardization** of consumption behaviour, clothes and cultural products have a tendency to produce rising resemblances in the living conditions of societies.
    - o **Diversification** strives to preserve the multiple facets of society by promoting access to the diverse features of world heritage.

  Globalization engenders exclusion, growth of economic and social differences, aggravation of clashes between groups of different identities, the dislocation of the societies and the dissipation of commitments to universal solidarity.
- Everyone cannot get peace as there are many obstacles in satisfying desires.
    - o In modern lifestyle the perception of man is not correct. One is not in a position to perceive things rightly and may have certain undesirable notions about self and may refuse to see reasons behind what one is doing.
    - o Selfishness and materialistic nature induces a person to act according to himself in his own interest.
    - o Circumstances are always fluctuating and these are beyond one's control. Sometimes up and down in life makes a man of different personality.
- Political Conflicts in a nation also adversely affects the lifestyle of its nationals.
- Lack of value based educational programmes. Values like truth, honesty, righteous conduct are disappearing from the families and from the school set up.

### 7.4.1 Modern Lifestyle: Effect on Environment

'The modern day lifestyle is detrimental to other life forms in the ecosystem. There is a great need to effect a change in the stance towards environment and life style as well,' said Dr Ayub Khan.





NOTES

Most of the environmental problems of the present day are essentially man-made. The role of man is therefore, important because it is his attitude and values which shapes the environment. Environment comprises of: Physical, social, emotional and educational environment environment.

1. **Physical environment:** Global warming, green house effect, deforestration, imbalanced nature, floods, drought, heavy rains and unhygienic colonization are the main effects on environment by the modern lifestyle.
2. **Social, emotional and psychological environment:** The old-traditional way of life has vanished forever. Today only villages and some small towns remind us of this kind of life, and as time passes, more people will choose to abandon traditional way of life and move to the 'big city'.

   Modern way of life has nothing in common with the traditional one. Human habits, values, norms have changed. The most important of these social changes can be observed in human relationships, family economy, education, government, health, and religion.

   In traditional societies, to begin with, there was a strong fellow-feeling; everybody was considered a friend and was expected to act this way, in case of personal or family crisis.

   In addition to the change in human behaviour towards people outside his family, there is change in family life as well. The extended family used to provide all means of socialization and economic production.
3. **Educational environment:** Education has also affected the environment. Pre-industrial societies addressed education only to the elite and the rich. In modern societies, however, basic education is open for everyone, and the number of persons achieving higher education is rising all the time. Heavy expenses and high status of international branded schools and colleges for higher education has just become a game of money and showing off stature which is disintegrating values and discipline.

### 7.4.2 Values and Ethics of Life

Value denotes the degree of importance of something with the aim of determining what action is best to do or live or at least attempt to describe the value of different actions. It may be described as treating actions themselves as abstract objects, putting value to them. It deals with right conduct and good life, in the sense that a highly, or at least relatively highly, valuable action may be regarded as ethically 'good' and an action of low, or at least relatively low, value may be regarded as 'bad'.

What makes an action valuable may in turn depend on the ethic values of the objects it increases, decreases or alters. An object with 'ethic value' may be termed an 'ethic or philosophic good'

**Definitions**

1. **Kane (1962):** 'Values are the ideals, beliefs or norms which a society or the large majority of the society's members hold'
2. **T.W. Hipple (1969):** 'Values are conscious or unconscious motivators and justifiers of the actions and judgment'
3. **Prof. C. Seshadri (1992):** 'Values refers to objects that human beings consider desirable and worthy of pursued in their thoughts, feelings and actions. These

NOTES

objects may be material or abstract qualities and state of mind and heart like truthfulness, happiness, peace, justice. In any case they function as ideals and standards and govern human actions'

4. **Urban:** 'Value is that which satisfies human desire'

## Nature of Values

- Values are standards or guidelines for an individual's life, nation and its polices.
- Values are influenced by an individual's experiences, desires and specific situations.
- Values stir our life's journey.
- Values are not static.
- Values are modes of organizing conduct.
- Values possess both cognitive and affective dimensions.
- Values can be structured and restructured through process of reflective thinking. It animates an individual.
- Values energize individuals to actions.
- Values are felt sometimes partly and sometimes wholly and are influenced by emotions.
- Values are acquired subconsciously in many ways.

## Types of Values

### 1. Personal Value

A personal value is absolute or relative. Personal values provide an internal reference for what is good, beneficial, important, useful, beautiful, desirable, constructive, etc. Values generate behavior and help solve common human problems for survival by comparative rankings of value, the results of which provide answers to questions of why people do what they do and in what order they choose to do them.

According to Morris Massey, values are formed during three significant periods:

- Imprint period from birth to 7 years.
- Modelling period from 8–13 years.
- Socialization period from 13–21 years.

### 2. Cultural value

Individual cultures develop values which their members broadly share. Values relate to the norms of a culture, but they are more global and abstract than norms. Norms provide rules for behaviour in specific situations, while values identify what should be judged as good or evil. While norms are standards, patterns, rules and guides of expected behavior, values are abstract concepts of what is important and worthwhile. Flying the national flag on a holiday is a norm, but it reflects the value of patriotism. Wearing dark clothing and appearing solemn are normative behaviors at a funeral. In certain cultures norms reflect the values of respect and support of friends and family. Different cultures reflect different values.

### 3. Intrinsic value

Intrinsic value is an ethical and philosophic property. It is the ethical or philosophic value that an object has in itself or for its own sake, as an intrinsic property. An object with intrinsic value may be regarded as an end or end-in-itself.





NOTES

Intrinsicism is the belief that value is a non-relational characteristic of an object. This means that an object can be valuable or not, good or bad, without reference to who it is good or bad for, and without reference to the reason it is good or bad.

### 4. Extrinsic value

Extrinsicism is the tendency to place major emphasis on external matters rather than on more profound realities. In terms of morals and ethics, it tends to stress the external observance of laws and precepts, with lesser concern for the ultimate principles underlying moral conduct.

### 5. Social value

Social values are good for the society and form the basis of the relationship of an individual with other people in society.

### 6. Ethical values

These values relate to our personal behaviour with our fellow beings. These may be regarded as a study under ethics, which, in turn, may be grouped as philosophy. of the more broad (and vague) philosophic value.

Ethical value denotes something's degree importance, with the aim of determining what action or life is best to do, or at least attempt to describe the value of different actions. It may be described as treating actions themselves as abstract objects, putting value to them.

It deals with right conduct and good life, in the sense that a highly, or at least relatively highly, valuable action or may be regarded as good, and an action of low, or at least relatively low, value may be regarded as bad.

### 7. Economical value

Economic value may be regarded as a result of philosophical value. The limit where a person considers to purchase something may be regarded as the point where the personal philosophic value of possessing something exceeds the personal philosophic value of what is given up in exchange for it, e.g. money. In this light, everything can be said to have a 'personal economic value' in contrast to its 'societal economic value.'

### 8. Aesthetic value

These are those which provide pleasure and happiness to individuals.

## 7.4.3 Ethics for Life

Ethics is the branch of study dealing with what is the proper course of action for man. It is the study of right and wrong in human endeavours. At a more fundamental level, it is the method by which we categorize our values and pursue them.

Ethics is a requirement for human life. It is our means of deciding a course of action. Without it, our actions would be random and aimless. There would be no way to work towards a goal because there would be no way to pick between a limitless numbers of goals. Even with an ethical standard, we may be unable to pursue our goals with the possibility of success. To the degree which a rational ethical standard is taken, we are able to correctly organize our goals and actions to accomplish our most important values. Any flaw in our ethics will reduce our ability to be successful in our endeavors.

A proper foundation of ethics requires a standard of value to which all goals and actions can be compared to. This standard is our own lives, and the happiness which makes them livable. This is our ultimate standard of value, the goal in which an ethical man must always aim. It is arrived at by an examination of man's nature, and recognizing his peculiar needs. A system of ethics must further consist of not only emergency situations, but the day-to-day choices we make constantly. It must include our relations to others, and recognize their importance not only to our physical survival, but to our well-being and happiness. It must recognize that our lives are an end in themselves, and that sacrifice is not only not necessary, but destructive.

### 7.4.4 Sustainable Development

Sustainable development is such a concept that signifies that the rate of consumption or the use of natural resources should be approximate to the rate at which these resources can be substituted or replaced. It also requires that a nation or a society should be able to satisfy its requirements—social, economic and others, without undermining the interest of our future generations. Developed countries use too many natural resources and such practice cannot continue for long. Mother Nature has been making available its resources and services and it is also serving as a receptacle for absorbing wastes for too long a time. We have to realize now that nature today is very fragile. Nature is finite. And experts have warned that it has reached a critical threshold beyond which it would lead to ecological decline that would further lead to nothing but 'disaster'. These experts are strong advocates of 'limits to growth' philosophy.

This concept of sustainable development can be further extended to the principle of justice and equity (equal distribution) between the developed and underdeveloped countries of North and South. Therefore, national as well as international leaders and institutions have a major responsibility for sound developmental, economic and environmental issues. They should keep in view the principle of equity and those principles that determine the intergenerational inequities.

Another aspect of sustainable development is related to system analysis, that is to say, how economic, social and environmental systems interact at various scales of operation, to lead sustainable development that will strike optimal balance among the three subsystems. It must ultimately lead to reduced poverty in developing countries by minimizing resources depletion, environmental damage and social instability.

Thus, sustainable development should lead to:

- Protecting the environment
- Avoiding depletion of non-renewable resources
- Seek reliance on alternative sources
- Equal access to resources
- Intergenerational distribution of resources
- Systems thinking

#### Sustainable Global Governance

In the 1970s, it was realized that there were 'limits to growth'. If growth continued unbridled at the existing rates, it was asserted that it would exhaust the limited stock of natural resources of the earth. Although technological innovations have contributed in pushing outwards the 'limits to growth', it is now being argued that the limits must be evaluated in terms of the 'carrying capacity' of the environment. There is a consensus over the fact that growth without commensurate efforts at environmental protection will pose a global threat.





The international community has responded to this perceived threat and environmental protection and sustainable development concerns are now on a high priority of the international agenda. The last century has seen a proliferation of international legal instruments—declarations and agreements—aimed at environmental protection. Whereas declarations are more general in nature, containing a general commitment to environmental protection without being legally binding, agreements contain binding obligations for the member states and deal with specific issues relating to particular environmental problems.

On various occasions, the highest representatives of states and governments have got together in international conferences on environmental protection and development. An international structure has been put in place, which is devoted to further the objective of environmental protection. There is also talk of setting up a centralized world body—a World Environment Organization (WEO)—to address the problems of environment. However, despite the intensified efforts at the international level, there are numerous challenges that must be met in order to allow these initiatives to be successful in their endeavour.

Various environmental problems have been identified, some related to the conservation of natural resources and ecosystems, such as forests, wildlife, biodiversity, wetlands, migratory species, etc. Issues put a question mark on how much the earth can give. Other issues relate to ensuring that we stay within the limits of the 'carrying capacity' of the environment. Issues, mostly relating to ozone depletion, global warming, hazardous wastes, persistent organic pollutants (POPs), hazardous chemicals, genetically modified organisms (GMOs), atmospheric pollution, marine pollution, etc., relate to the basic question of how much the earth can take.

Because of the diversity of environmental problems, the legal regime at the international level is necessarily fragmented, with over 200 Multilateral Environmental Agreements (MEAs) each dealing with different environmental problems.

The basic principles of environment management are increasingly being incorporated into political constitutions since the Stockholm Conference on Human Environment held in 1972. Therefore, the Stockholm Conference has taken issues such as proper use of natural reserves, environmental development as well as ecological pollution into consideration and they found expression in constitutional form. These are often articulated in terms of obligations which are stated clearly to its citizens. Moreover, a duty is often imposed on citizens to safeguard the national environment. Most of the developing countries exhibit this constitutional trend.

#### Equitable Use of Resources for Sustainable Lifestyle

There is a big division in the world in the use of resources, viz., north and south, more developed countries (MDCs) and less developed countries (LDCs), 'haves' and 'have nots'. It is observed that MDCs have only 22 per cent of world's population, but they use 88 per cent of natural resources, 73 per cent of energy and command 85 per cent of income; in turn, they contribute a big proportion to its pollution. On the other hand, LDCs have very low or moderate industrial growth and have 78 per cent of the world's population. They use only 12 per cent of natural resources, 27 per cent of energy and have only 15 per cent of global income. The rich have gone richer and the poor have become poorer. There is a huge gap between them. This is not sustainable growth.

NOTES

The solution to this problem is to distribute wealth and resources in a more evenhanded way. An unbiased method of distribution has to have global consent. There are two major causes of non sustainability. These are as follows:

- Overpopulation in poor countries
- Overconsumption of resources by rich countries

The rich countries will have to lower their consumption levels and the minimum needs of the poor must be satisfied by providing them resources. The need of the hour is fairer sharing of resources between the rich and poor, which will bring about sustainable development for all.

Within the concept of sustainable development, industrial ecology plays a significant role in order to create a balance between industrial development and preservation of natural resources. It refers to the adoption of such industrial processes, technology, equipment and raw material where the products can be recycled after their life cycle is complete or can be put to alternative use or a byproduct can be made out of it. This not only reduces the pressure on raw materials and compensates them for producing afresh; it also reduces the costing impact. Advanced technology also reduces wastage and is more energy efficient.

**Case Exhibit: Tackling Challenges for Sustainable Development**

The United Nations Conference on Sustainable Development will be held on June 20–22, 2012, which is commonly known as Rio+20, treating 'green economy within the context of sustainable development and poverty eradication' and 'institutional framework for sustainable development' as its two themes. Under the two themes, Rio+20 will assess the progress and implementation gaps in meeting already agreed commitments, address new and emerging challenges, and secure renewed political commitment to sustainable development.

It is known that uneven development, severe regional environmental pollution, desertification, climate change, population growth, poverty, increased demand for natural resources and energy supply are among the challenges China, India and many other developing countries are facing for sustainable development.

China is committed to pursuing sustainable development as a national strategy. As a matter of fact, sustainable development is embodied in China's traditional values. Over 2,000 years ago, the great Chinese philosophers Mencius observed that 'refraining from over fishing will ensure fishing last forever' and 'cutting wood according to the season ensure the health of forest' are the means to achieve harmony between man and nature.

China has achieved remarkable results in promoting sustainable development process and accumulated some experience. China has instituted the most stringent systems for managing farmland and water resources, and fed one fifth of the global population with less than 10 per cent of the world's farmland and only 28 per cent of the world's per capita water resources. In the past decade, China has implemented the policy of development-oriented aid to the rural poor and lifted around 70 million people out of poverty, making it the first country to meet the Millennium Development Goal. China has carried out afforestation for two decades, with coverage now reaching 620,000 square kilometers. It is also committed to the implementation of energy conservation, and increased the efforts in pollution control. Since 2005, while maintaining a robust economic growth, China has cut energy consumption per unit of GDP by 21 per cent, and emissions of major pollutants such as S02 and COD by 16 per cent and 14 per cent respectively. China also attaches great importance to people's livelihood and strives to promote the well-being of the people.





NOTES

China cannot develop itself in isolation from the rest of the world, and global sustainability cannot be maintained without China. China has taken the initiative to promote bilateral and multilateral cooperation. It has carried out cooperation with many countries in the fields of resources, environment, disaster prevention and mitigation, and a large number of demonstration projects on sustainable development with the United Nations agencies and other international organizations.

Meanwhile, China is also providing any possible assistance to other developing countries and least developed countries in accordance with the principles of equality, mutual benefit, and emphasis on practical results, utilization of diversified forms, and the pursuit of common development. As of the end of 2010, China had offered zero tariff treatment to more than 60 per cent of the products from 38 least developed countries, provided other developing countries with 287 billion yuan (USD 46 billion) of financial assistance, and written off 30 billion yuan (USD 4.76 billion) debt of 50 heavily indebted poor countries and least developed countries.

China is in the process of rapid industrialization and urbanization and its development has many constrains. First, China is poor in natural endowment, low in per capita share of resources, and it has a fragile eco-system and disparity in regional development. Second, it is facing the dual pressures to accelerate development while restructuring the economy. China is a country that is still moving ahead on the path of development and has a huge large population, a weak economic base and feeble productivity. Measured by the newly-adjusted national poverty line, China still has 128 million poor people in rural areas. Each year, over 10 million people enter the labour market. The conflict between resources supply and demand is more prominent, the emissions of major pollutants continue to exceed the capacity of the environment. China thus faces a formidable task of growing the economy while protecting the environment. Third, economic and social structural problems are prominent in China. The industrial structure is not sound; the domestic and external demand as well as investment and consumption are not balanced; economic growth is too dependent on investment and exports; and domestic consumer demand is obviously insufficient.

China and India, as two emerging economies consisting of one-third of the population in the world, both want to eradicate poverty and achieve modernization. The Indian saying 'We produce to live, not to consume' and the ancient Chinese philosophy of 'unity between heaven and man' and 'the law of following the nature' are all examples of oriental wisdom. We look forward to the cooperation between China and India in Rio+20 to guarantee a sustainable development for both countries and other developing countries. We hope that the Rio+20 shall send a positive, clear and powerful message to reinvigorate international cooperation and inject new vitality into sustainable development.

***Source:*** Adapted from http://www.indianexpress.com/news/tackling-challenges-for-sustainable-development/964069/0 Accessed on 20 June, 2012

### 7.4.5 Balance between Trade and Environmental Policy

We now discuss different aspects of globalization such as free trade and terms of trade in the context of environment. We will also discuss standards of the environment.

The recent trends in globalization of production and steep reduction in all barriers to allow free flow of trade and investment are opposed by many environmental groups all over the world. They perceive globalization as harmful to the environment for various reasons:

NOTES

- Free trade is seen as a means of more output and income, which means more resource depletion and degradation of the natural environment.
- Free trade, investment and globalization of production will lead to increase in transport activity and encourage the relocation of environmentally degrading industries to countries with lower environmental standards or more fragile natural environments, and thus, contribute to further environmental damage.
- Free foreign investment reduces the incentive to develop environmentally friendlier technologies.
- The outcome of free trade may be industrial and agricultural reorganization to capture the economies of scale made possible by larger markets. This may comprise larger manufacturing plants: factories that are aesthetically unpleasing and farms that remove hedgerows and use intensive agricultural techniques.
- Free international trade overlooks the environment, which is similar to domestic free markets that ignore environmental losses. In other words, trade liberalization can be expected to increase market failure (Pearce and Warford, 1993, pp. 299-300).

### Terms of Trade and Environment

The World Commission on Environment and Development (Brundtland Commission 1987) viewed that world commodity trade frequently encourages resource depletion in the developing world:

> The proportion of increased volumes of commodity exports has led to cases of unsustainable overuse of the natural resource base. While individual cases may not fit this generalization, it has been argued that such processes have been at work in ranching for beef, fishing in both coastal and deep-sea waters, forestry, and the growing of some cash crops. Moreover, the prices of commodity exports do not fully reflect the environmental costs to the resource base.

Further the Brundtland Commission also draws attention to the possible consequences of increases in trade to primary product exporting developing countries. The 'Brundtland hypothesis' about the link between the terms of trade and the environment is as follows (Pearce and Warford 1993, pp. 285-286):

> If the terms of trade decline, exporting countries must export more and more just to maintain foreign exchange earnings constant. In the specific case of crop exports, then, emphasis is placed on expanding acreage in order to increase exports. If the affected crops are environmentally hazardous - groundnuts or maize - soils in land that is not marginal may be directly damaged. Harm to marginal soils would be even more. Even if the crops are environmentally benign, efforts might be made to expand cultivation onto marginal lands by clearing shrub and forest land and adding to potential erosion through deforestation. The vagaries of trade and the fluctuating exchange rates are often shown to cause extensive environmental damage. Devalued currencies of many commodity exporting developing countries are shown as a major reason for increasing depletion of forests which are cleared for exports. The liberal trade in ivory during 1980s appears to have depleted almost one-third of the elephant population in Africa. Massive depletion of forests is attributed to the pressure of free trade in hardwood.

Thus, the present phase of globalization, with an emphasis on free trade, would make the world's tropical forests unsustainable, unless there are firm commitments. The growing dependence on exports seems to result often in inappropriate and environmentally damaging shift in cropping pattern. For instance, growing demands for cassava have made small farmers in Thailand to extend cassava cultivation into previously forested land. It is shown that cassava production for export is a noteworthy basis of deforestation, soil erosion and soil nutrient reduction in Thailand.

There are instances of extensive environmental destruction unleashed by the corporate culture. The denudation of forests and with that the destruction of the culture of commons is widely known. The extensive and ruthless ecological damage done to the Ogoni region in Nigeria by the multinational oil companies and the uprooting of the livelihood of its people are well documented. Perhaps, one of the notorious examples of globalization facilitating polluting and hazardous industries in the developing countries is the case of Union Carbide Pesticide factory in Bhopal, India. The Methyl Iso Cyanide (MIC) gas leak from this factory rendered several thousand people blind. This was one of the worst industrial tragedies of the last century.

## 7.4.6 Fundamentals of Environment and Sustainable Development

To evaluate the critical aspects of environment and development, some basic concepts need to be explained.

### Population and its Implication

There are two aspects that affect environment: a) Population growth and b) economic development. The interaction between population growth, resource depletion/ environmental damage has been debated. High population growth causes stress on the environment, and there are thinkers, who feel that the blame has to be on economic development, industrial growth and unsustainable economic development are the matters of cause of concern especially in development.

It can be expressed by the following equation:

$$I = P \times A \times T$$

where

I = Impact of environment
P = Population
A = Affluence (consumption)
T = Technology coefficient

More people means more pressure on resources, more consumption of energy, more production of wastes including greenhouse gases – all have adverse effects on the environment. India's population has crossed the hundred crores mark. The question is whether we have devised adequate developmental programmes that can match the increase in population. If not, population factor itself would be a sufficient contribution toward degradation of environment and resource depletion.

Sustainable development is about integrational equity. But, if the future equity is of great concern, it is not legitimate to ignore the equity occurring in the present populations in different parts of the globe. Sustainability should reflect equity, environmental concerns and social responsibilities vis-à-vis population regardless of time or location.

### Limits to Growth

We will need to change attitudes, consumption patterns, manufacturing and marketing practices and get into a technological world that it is less intensive in its use of materials

NOTES

and energy, to be able to manage the environmental crisis. Improvement of efficiency alone is not going to be enough. Growth has been treated as an infinite variable. This is not a correct assumption. 'Earth's carrying capacity' is not seriously thought about. And such a world has to desperately try to keep pace with the environmental problems because of such incorrect assumptions.

For example, climate change (global warming), can be combated only if the world transits to a non-carbon energy economy, only after that, the limitations of the environmental concerns posed by a carbon energy economy would reduce. The world needs an international mechanism that not only provides incentives to all nations to live within their entitled norms (amounts), but also helps to promote a rapid transition to a non-carbon energy economy.

There is considerable scope for dematerialization and de-energization without a decrease in the living standards. This will be possible only if it is promoted through changes in the fiscal system, which supports appropriate technological improvements. This can happen if the principle of sufficiency is ignored. We will need to set a level of sufficiency, i.e., this much and not beyond it.

Sufficiency will be possible only if one day the world is prepared to reach an international agreement on limits to growth and to say, that we have fixed our level of greed and no more. Global agreement is still a distant possibility.

For sustainable use of global common systems, a separate set of policies will have to be adopted. It has to be a system that provides for the establishment of equitable entitlements or property rights to provide economic incentives to those who use this environment space in a sustainable manner and disincentives to those who use it in an unsustainable manner.

The world faces an enormous challenge in the coming years.

**Economy**

Rate of Gross National Product (GNP) is one of the most important indicators of economic performance of any nation. Increase in GNP indicates the economic health of the country. Such an increase however, is based on high rate of consumption of natural resources, of which depletion of environmental resources is significant. Economic growth comes in conflict with issues of environmental concerns.

India had adopted the Economic Reforms Models via liberalization and globalization. There are significant advantages from this transition; however, the ecological disadvantages are required to be taken into account. Long-term ecological costs are to be taken into account. In our effort to increase the GNP, we may not like to liquidate ecological assets.

High economic growth results in high rate of extraction, transformation and utilization of non-renewable resources. It is important to also achieve good rate of regeneration of natural resources.

Economic growth cannot take place without sustaining ecological costs. Economic growth has to be environmentally sustainable. Developing countries have yet to undertake more developmental programmes and attain reasonable standards of living. Therefore, GNP must increase in these countries. Elements of resource generation and positive approach to environment have to be incorporated in developmental programmes.

**Poverty**

In order to properly manage environment and resources, due consideration should be given to the fact that poor people directly depend upon natural resources for their livelihood. Sustainable development must address the issue of eradication of poverty which is linked with employment for women and youth and other income generation programmes.

**Human Settlement Issues**

The environmental implications of urban development and rural development (slums) must be recognized. It will be necessary to give priority to the needs of urban as well as rural poor. The human settlement programme should concentrate on the following aspects:

- Providing shelter to all
- Investment in infrastructure- water, sewage and solid waste
- Promotion of sustainable energy and transport system
- Promotion of sustainable land use management

**Land Resources**

Land not only includes a physical entity in terms of topography, but it also includes natural resources, soil, minerals and biota. These components provide varieties of services which are essential for life support system. Land is an infinite resource. Integrated approach is necessary for the management of land.

**Forests**

There should be a rational approach adopted for management of forests and forest lands. Sustainable forest development, production of forest products and forest services require institutional approach at the government level.

## 7.4.7 Urban Problems Related to Energy

Cities are the major hubs of economic growth, trade, education, innovations and employment. Until recently, a majority of human population lived in the rural areas and their economic activities centered around agriculture, cattle rearing, fishing, hunting or cottage industry. It was some two hundred years ago with the dawn of industrial era that the cities showed rapid development. Now, almost half of the world's population resides in urban areas and there is an increasing movement of the rural folk to cities in search of employment. The urban growth is so fast that it is becoming difficult to accommodate all the industrial, commercial and residential facilities within a limited municipal boundary. As a result, there is spreading of the cities into the sub-urban or rural areas too. This phenomenon is known as urban sprawl.

In developing countries too, urban growth is very fast and in most of the cases it is uncontrollable and unplanned growth. In contrast to the rural set-up, the urban set-up is densely populated, consumes a lot of energy and materials and generates a lot of waste.

NOTES

The energy requirement of an urban population is much higher than that of the rural ones. This is because urban people have a higher standard of life and their lifestyle demands more energy inputs in every sphere of life. The energy demanding activities include the following:

- Residential and commercial lighting
- Transportation means including automobiles and public transport for moving from residence to workplace
- Modern lifestyle using a large number of electrical gadgets in everyday life
- Industrial plants using a big proportion of energy
- A large amount of waste generation which has to be disposed off properly using energy based techniques
- Control and prevention of air and water pollution which need energy dependent technologies

Due to high population density and high energy demanding activities, the urban problems related to energy are much more magnified as compared to rural population.

### 7.4.8 Water Conservation

Water being one of the most precious and indispensable resources, it needs to be conserved. The following strategies can be adopted for conservation of water.

1. **Decreasing run-off losses:** Huge water-loss occurs due to run-off on most of the soils, which can be reduced by allowing water to infiltrate into the soil. This can be achieved by using contour cultivation, terrace farming, water spreading, chemical treatment or improved water-storage system.
   - *Contour cultivation:* Small furrows and ridges across the slopes, trap rainwater and allow more time for infiltration. Terraces constructed in deep soils have large water-storage capacity. On gentle slopes trapped run off is spread over a large area for better infiltration.
   - *Conservation-bench terracing:* It involves construction of a series of benches for catching the runoff water.
   - *Water spreading:* It is done by channeling or lagoon-levelling. In channeling, the water flow is controlled by a series of diversions with vertical intervals. In lagoon-levelling, small depressions are dug in the area so that there is temporary storage water.
   - *Chemical wetting agents (Surfactants):* These seem to increase the water intake rates when added to normal irrigated soil.
   - *Surface crop residues:* Tillage, mulch, animal residues, etc., help in reducing run-offs by allowing more time for water to penetrate into the land.
   - *Chemical conditioners:* Conditioners like gypsum ($CaSO_4.2H_2O$) when applied to sodic soils improve soil permeability and reduce run off. Another useful conditioner is HPAN (hydrolyzed poyacrylonitrile).
   - *Water-storage structures:* Structures like farm ponds, dug-outs, etc., built by individual farmers can be useful measures for conserving water through reduction of run-offs.
2. **Reducing evaporation losses:** This is more relevant in humid regions. Horizontal barriers of asphalt placed below the soil surface increase water availability and increase crop yield by 35-40 per cent. This is more effective on sandy soil but less effective on loamy sand soils.

   A co-polymer of starch and acrylonitrile called 'super slumper' has been reported to absorb water up to 1400 times its weight. The chemical has been found to be useful for sandy soils.
3. **Storing water in soil:** Storage of water takes place in the soil root zone in humid regions when the soil is wetted to field capacity. By leaving the soil fallow for one season, water can be made available for the crop grown in the next season.
4. **Reducing irrigation losses:** (a) Use of lined or covered canals to reduce seepage (b) irrigation in early morning or late evening to reduce evaporation losses (c) sprinkling irrigation and drip irrigation to conserve water by 30-50 per cent (d) growing hybrid crop varieties with less water requirements and tolerance to saline water help conserve water.
5. **Reuse of water:** (a) Treated wastewater can be used for ferti-irrigation, (b) using grey water from washings, bath-tubs, etc., for watering gardens, washing cars or paths help in saving fresh water.
6. **Preventing wastage of water:** This can be done in households, commercial buildings and public places. (a) Closing taps when not in use, (b) repairing any leakage from pipes, (c) using small capacity flush in toilets.
7. **Increasing block pricing:** The consumer has to pay a proportionately higher bill with higher use of water. This helps in the economic use of water by the consumers.

#### Rainwater Harvesting

Rainwater harvesting is a technique of increasing the recharge of groundwater by capturing and storing rainwater. This is done by constructing special water-harvesting structures like dug wells, percolation pits, lagoons and check dams. Rainwater, wherever it falls, is captured and pollution of this water is prevented. Rainwater harvesting is not only proving useful for poor and scanty rainfall regions, but also for the rich ones.

The annual average rainfall in India is 1200 mm; however, in most places it is concentrated over the rainy season, from June to September. It is an astonishing fact that Cherapunji, the place receiving the second highest annual rainfall of 11000 mm still suffers from water scarcity. The water flows away as run-off and there is little vegetation to check the run-off and allow infiltration. Till now, there is hardly any rainwater harvesting being done in this region, thereby losing all the water that comes through rainfall.

Rainwater harvesting has the following objectives:

- To reduce run-off loss
- To avoid flooding of roads
- To meet the increasing demands of water
- To raise the water table by recharging ground water
- To reduce ground water contamination
- To supplement ground water supplies during lean seasons

NOTES

Rainwater can be mainly harvested by anyone of the following methods:

- By storing in tanks or reservoirs above or below ground
- By constructing pits, dug wells, lagoons, trench or check-dams on small rivulets
- By recharging the ground water

Before adopting a rainwater harvesting system, the soil characteristics, topography, rainfall pattern and climatic conditions should be understood.

### Traditional rainwater harvesting

In India, it is an old practice in high rainfall areas to collect rainwater from roof tops into storage tanks. In foot-hills, water flowing from springs is collected by embankment type water storage. In Himalayan foot-hills, people use hollow bamboos as pipelines to transport the water of natural springs. Rajasthan is known for its '*tankas*' (underground tanks) and '*Khadins*' (Embankments) for harvesting rainwater. In our ancient times, we had adequate *taalaabs, baawaris, johars, hauz,* etc., in every city, village and capital cities which were used to collect rainwater and ensure adequate water supply in dry periods.

### Modern techniques of rainwater harvesting

In arid and semi-arid regions, artificial ground water recharging is done by constructing shallow percolation tanks. Check-dams made of any suitable native material (brush, rocks, plants, loose rocks, wire nets, stones, slabs, sacks, etc.) are constructed for harvesting run-off from large catchment areas. Rajendra Singh of Rajasthan popularly known as 'waterman' has been doing a commendable job for harvesting rainwater by building check-dams in Rajasthan and he was honoured with the prestigious Magsaysay Award for his work.

Groundwater flow can be intercepted by building groundwater dams or storing water underground. As compared to surface dams, groundwater dams have several advantages like minimum evaporation loss, reduced chances of contamination, etc.

In roof top, rainwater harvesting which is a low cost and effective technique for urban houses and buildings, the rainwater from the top of the roofs is diverted to some surface tank or pit through a delivery system which can be later used for several purposes. Also, it can be used to recharge underground aquifers by diverting the stored water to some abandoned well or by using a hand pump.

All these techniques of rainwater harvesting are low cost methods with little maintenance expenses. Rainwater harvesting helps in recharging the aquifers, improves groundwater quality by dilution, improves soil moisture and reduces soil erosion by minimizing run-off water.

### Watershed Management

The land area drained by a river is known as the river basin. Watershed is defined as the land area from which water drains under gravity to a common drainage channel. Thus, watershed is a delineated area with a well-defined topographic boundary and one water outlet. The watershed can range from a few square kilometers to few thousand square kilometers in size. In the watershed, the hydrological conditions are such that water becomes concentrated within a particular location like a river or a reservoir, by which the watershed is drained.





NOTES

The watershed comprises complex interactions of soil, landform, vegetation, land use activities and water. People and animals are an integral part of a watershed. They have mutual impacts on each other.

A watershed is directly involved in sustained food production, water supply for irrigation, power generation and transportation as well as for influencing sedimentation and erosion, vegetation growth, floods and droughts.

Thus, management of watersheds treating them as basic functional units is extremely important and the first Integrated Watershed Management was adopted in 1949 by the Damodar Valley Corporation.

**Watershed degradation:** Watersheds are very often found to be degraded due to uncontrolled, unplanned and unscientific land-use activities. Organizing, deforestation, mining, construction activities, industrialization, shifting cultivation, natural and artificial fires, soil erosion and ignorance of local people have been responsible for degradation of various watersheds.

**Objectives of watershed management:** Rational utilization of land and water sources for optimum production causing minimum damage to the natural resources is known as watershed management. The objectives of watershed management are as follows:

1. To rehabilitate the watershed through proper land use adopting conservation strategies for minimizing soil erosion and moisture retention so as to ensure good productivity of the land for the farmers
2. To manage the watershed for beneficial developmental activities like domestic water supply, irrigation, and hydropower generation
3. To minimize the risks of floods, droughts and landslides
4. To develop rural areas in the region with clear plans for improving the economy of the regions

**Watershed management practices:** In the Fifth Five Year Plan, watershed management approach was included with a number of programmes for it and a national policy was developed. In watershed management, the aspects of development are considered with regard to availability of the resources.

The practices of conservation and development of land and water are taken up with respect to their suitability for people's benefit as well as sustainability. Various measures which are taken up for management include the following:

1. **Water harvesting:** Proper storage of water is done with provision for use in dry seasons in low rainfall areas. It also helps in moderation of floods.
2. **Afforestation and agro-forestry:** In watershed development, afforestation and crop plantation play a very important role. They help in preventing soil erosion and retention of moisture. In high rainfall areas, woody trees are grown in between crops to substantially reduce the run-offs and loss of fertile soil. In Dehradun, trees like eucalyptus, leucaena and grasses like chrysopogon are grown along with maize or wheat to achieve the objectives. Woody trees grown successfully in such agro-forestry programmes include *sheesham*, teak and *keekar* which have been used in watershed areas of river Yamuna.
3. **Mechanical measures for reducing soil erosion and run-off losses:** Several mechanical measures like terracing, bunding, bench terracing, no-till farming, contour cropping, strip cropping, etc., are used to minimize run-offs and soil

erosion, particularly on the slopes of watersheds. Bunding has proved to be a very useful method in reducing run-off, peak discharge and soil loss in Dehradun and Siwaliks.

4. **Scientific mining and quarrying:** Due to improper mining, the hills lose stability and get disturbed resulting in landslides, rapid erosion, etc. Contour trenching at an interval of one meter on overburdened dump, planting some soil binding plants, land draining of water courses in the mined area are recommended for minimizing the destructive effects of mining in watershed areas.

5. **Public participation:** People's involvement including the farmers and tribals is the key to the success of any watershed management programme, particularly in the soil and water conservation. People's cooperation as well as participation has to be ensured for the same. The communities are to be motivated for protecting freshly planted areas and maintaining water harvesting structures implemented by the government or some external agency (NGO) independently or by involving the local people. Educating the people about the campaign and its benefits or sometimes, paying certain incentives to them can help in effective people's participation.

Successful watershed management has been done at Sukhomajri Panchkula, Haryana through active participation of the local people.

Watershed management in the Himalayan region is of vital importance since most of the watersheds of our country lie there. Several anthropogenic activities accelerate its slope instability which needs to be prevented and efforts should be made to project the watershed by preventing overgrazing, terracing and contour farming to check run-offs and erosion. On steeper slopes with sliding faces, straw mulching tied with thin wires and ropes helps in establishing the vegetation and stabilizing the slopes.

### 7.4.9 Resettlement and Rehabilitation Issues

Economic development raises the quality and standard of living of the people of a country. Developmental projects are planned to bring benefits to the society. However, in the process of development, very often, there is an overexploitation of natural resources and degradation of the environment. Besides this, quite often, the native people of the project site are directly affected. These native people are generally the poorest of the poor, the underprivileged tribal people. Various types of projects result in the displacement of the native people who undergo tremendous economic and psychological distress, as the socio-economic and ecological base of the local community is disturbed.

- **Displacement problems due to dams:** The big river valley projects have one of the most serious socio-economic impacts due to large-scale displacement of local people from their ancestral home and loss of their traditional profession or occupation. India is one of the countries in the world leading in big dam construction and in the last fifty years more than 20 million people are estimated to have directly or indirectly affected by these dams. Hirakud Dam, Bhakra Nangal Dam, Tehri Dam are the examples where many people and their villages in the vicinity benefitted. It also resulted in the Chipko Movement lead by Sunderlal Bahuguna.





- **Displacement due to mining:** Mining is another developmental activity, which causes displacement of the native people. Several thousands of hectares of land area is covered in mining operation and the native people are displaced. Sometimes, displacement of local people is due to accidents occurring in mined areas like subsidence of land that often leads to shifting people, e.g., various mines are predominant in Jharkhand, these mines had displaced many people.
- **Displacement due to creation of national park:** When some forests are covered under a national park, it is a welcome step for conservation of the natural resources. However, it also has a social aspect associated with it which is often neglected. A major portion of the forest is declared as core-area, where the entry of local dwellers or tribals is prohibited. When these villagers are deprived of their ancestral right or access to forests, they usually retaliate by some destructive activities. There is a need to look into their problems and provide them with some employment.

#### Rehabilitation Issues

The United Nations Universal Declaration on Human Rights has affirmed that the right to housing is the basic human right. In India, most of the displacements have resulted due to land acquisition by the government for various reasons. This is the reason that the government has brought into force the Land Acquisition Act, 1894. This Act makes it mandatory to serve notice to the people to vacate their lands if the need arises, according to government planning. Provision of cash compensation in lieu of the land vacated exists in the Act. The major issues related to displacement and rehabilitation are as follows:

- Tribals are usually the most affected amongst the displaced who are already poor. Displacement further increases their poverty due to loss of land, home, jobs, food insecurity, loss of access to common property assets, increased morbidity and mortality and social isolation.
- Break up of families is an important social issue arising due to displacement in which the women are the worst affected and they are not even given cash/land compensation.
- The tribals are not familiar with the market policies and trends. Even if they get cash compensation, they get alienated in the modern economic set-up.
- The land acquisition laws ignore the communal ownership of property, which is an inbuilt system amongst the tribals. Thus, the tribals lose their communitarian basis of economic and cultural existence. They feel like fish out of water.
- Kinship systems, marriages, social and cultural functions, their folk-songs, dances and activities vanish with their displacement. Even when they are resettled, it is individual-based resettlement, which totally ignores communal settlement.
- Loss of identity and loss of the intimate link between the people and the environment is one of the biggest losses. The age-long indigenous knowledge, which has been inherited and experienced by them about the flora and fauna, gets lost.

#### Rehabilitation Policy

There is a need for a comprehensive national rehabilitation policy. Different states are following different practices in this regard.

NOTES

There is a need to raise public awareness on these issues to bring the resettlement and rehabilitation plans on a humane footing and to honour the human rights of the oustees.

## 7.4.10 Environmental Ethics

Environmental ethics refers to the issues, principles and guidelines relating to human interactions with their environment. It is rightly said, 'The environmental crisis is an outward manifestation of the crisis of mind and spirit.' It all depends on how we think and act. If we think 'Man is all powerful and the supreme creature on this earth and man is the master of nature and can harness it at his will', it reflects our human-centric thinking. On the other hand, if we think 'Nature has provided us with all the resources for leading a beautiful life and she nourishes us like a mother, we should respect her and nurture her', this is an earth-centric thinking.

The first view urges us to march ahead gloriously to conquer the nature and establish our supremacy over nature through technological innovations, economic growth and development without much botheration about the damage done to the planet earth. The second view urges us to live on this earth as a part of it, like any other creation of Nature and live sustainably. So, we can see that our acts will follow what we think. If we want to check the environmental crisis, we will have to transform our thinking and attitude. That in turn, would transform our deeds, leading to a better environment and better future.

These two world-views are discussed here in relation to environmental protection.

### Anthropocentric worldview

This view guides most industrial societies. It puts human beings at the centre giving them the highest status. Man is considered to be the most capable for managing the planet earth. The guiding principles of this view are as follows:

- Man is the planet's most important species and is in charge of the rest of the nature
- Earth has an unlimited supply of resources and it all belongs to us
- Economic growth is very good and more the growth, the better it is, because it raises our quality of life and the potential for economic growth is unlimited
- A healthy environment depends upon a healthy economy
- The success of mankind depends upon how good managers we are for deriving benefits for us from the nature

### Ecocentric worldview

This is based on earth-wisdom. The basic beliefs are as follows:

- Nature exists not for human beings alone, but for all the species
- Earth's resources are limited and they do not belong only to human beings
- Economic growth is good till it encourages earth-sustaining development and discourages earth-degrading development
- Healthy economy depends upon a healthy environment
- Success of mankind depends upon how best we can cooperate with the rest of the nature while trying to use the resources of nature for our benefit





NOTES

Environmental ethics can provide us the guidelines for putting our beliefs into action and help us in deciding what to do when faced with crucial situations. Some important ethical guidelines known as earth ethics or environmental ethics are as follows:

- Love and honour the earth since it nurtures life
- Keep each day sacred on earth and celebrate the turning of its seasons
- Be grateful to the plants and animals which provides food.
- Limit the number of off springs because too many people will overburden the earth
- Do not waste resources on destructive weapons
- Do not run after gains at the cost of nature rather should strive to restore its damaged majesty
- Not to conceal from others the effects that have been caused by one's actions on earth
- Not to steal from future generations, their right to live in a clean and safe planet by impoverishing or polluting it
- Consume the material goods in moderate amounts so that all may share the earth's precious treasure of resources
- Our *Vedas* also have glorified each and every component of nature as gods or goddesses so that people have a feeling of reverence for them. Our religious and cultural rituals make us perform such actions that would help in the conservation of nature and natural resources. Even the various festivals envisaged by Hinduism also prescribe the participation of humans in the celebrations through nature. (Nisarga Pooja is what we perform during celebrations of our festivals, e.g., Satyanarayana Pooja, Vatapournitma, Baishakhi, Ganesh Festival, Dusshera)

  The concept of ahimsa in Buddhism and Jainism ensure the protection and conservation of all forms of life, thereby keeping the ecological balance of the earth intact. Our teachings on 'having fewer wants' ensure to put 'limits to growth', and thus, guide us to have an ecocentric lifestyle

## 7.4.11 Climate Change

Climate is the average weather of an area. It is the general weather conditions, seasonal variations and extremes of weather in a region. Such conditions which average over a long period, for at least thirty years is called climate.

The Intergovernmental Panel On Climate Change (IPCC) in 1990 and 1992 published the best available evidence about past climate changes, the greenhouse effect and recent changes in global temperature. It is observed that earth's temperature has changed considerably during the geological times. It has experienced several glacial and interglacial periods. However, during the past 10,000 years of the current interglacial period, the mean average temperature has fluctuated by 0.51°C over the 100 to 200 year period. We have relatively stable climate for thousands of years due to which we have practiced agriculture and increased population. Even small changes in climatic conditions may disturb agriculture that would lead to migration of animals including humans.

NOTES

Anthropogenic activities are upsetting the delicate balance that has been established between various components of the environment. Greenhouse gases have increased in the atmosphere resulting in increase in the average global temperature.

This may upset the hydrological cycle, resulting in floods and droughts in different regions of the world, causing sea level to rise, changes in agricultural productivity, famines and death of humans as well as livestock.

## Global Warming

Troposphere, the lower most layer of the atmosphere, traps heat by natural processes due to the presence of certain gases.

The average global temperature is 15°C. In the absence of greenhouse gases, this temperature would have been 18°C. Therefore, greenhouse effect contributes to a temperature rise to the tune of 33°C.

Heat trapped by greenhouse gases in the atmosphere keeps the planet warm enough to allow us and other species to exist. The two chief greenhouse gases are water vapour which is controlled by the hydrological cycle and carbon dioxide which is controlled mostly by the global carbon cycle. While the levels of water vapour in the troposphere have relatively remained constant, the levels of carbon dioxide have increased.

Other gases whose levels have increased due to human activities are methane and nitrous oxide. Deforestation has further resulted in elevated levels of carbon dioxide due to non-removal of carbon dioxide by plants through photosynthesis.

Warming or cooling by more than 2°C over the past few decades may prove to be disastrous for various ecosystems on the earth, including humans as it would alter the conditions faster than some species could adapt or migrate. Some areas will become inhabitable because of droughts or floods following rise in the average sea level.

## Measures to check global warming

To slow down enhanced global warming the following steps will be important:

- Cut down the current rate of use of CFCs and fossil fuel
- Use energy more efficiently
- Shift to renewable energy resources
- Increase in nuclear power plants for electricity production
- Shift from coal to natural gas
- Trap and use methane as a fuel
- Adopt sustainable agriculture
- Stabilize population growth
- Efficiently remove carbon dioxide from smoke stacks
- Plant more trees
- Remove atmospheric carbon dioxide by utilizing photosynthetic algae

## Greenhouse Gases

The phenomenon that worries the environmental scientists is that due to anthropogenic activities, there is an increase in the concentration of the greenhouse gases in the air that absorbs infra-red light containing heat and results in [illegible] of much of the outgoing thermal infra-red energy, thereby increasing the average surface temperature beyond 15°C. The phenomenon is referred to as the enhanced greenhouse effect to distinguish its effect from the one that has been operating naturally for millennia.

The greenhouse gases include carbon dioxide, chlorofluorocarbons, methane and nitrous oxide. These are the greenhouse gases present in the troposphere which result in an increase in the temperature of air and earth.

## Impacts of enhanced greenhouse effect

The enhanced greenhouse effect will not only cause global warming, but will also affect various other climatic and natural processes.

- **Global temperature increase**: It is estimated that the earth's mean temperature will rise between 1.5 to 5.5 °C by 2050, if inputs of greenhouse gases continues to rise at the present rate. Even at the lower value, earth would be warmer than it has been for the past 10,000 years.
- **Rise in sea level**: With the increase in global temperature, sea water will expand. Heating will melt the polar ice sheets and glaciers resulting in further rise in sea level. Current models indicate that an increase in the average atmospheric temperature of 3°C would raise the average global sea level by 0.2-1.5 meters over the next 50-100 years.

  One meter rise in sea level will inundate low-lying areas of cities like Shanghai, Cairo, Bangkok, Sydney, Hamburg and Venice, as well as agricultural lowlands and deltas in Egypt, Bangladesh, India and China. This will affect rice productivity. This will also disturb many commercially important spawning grounds, and would probably increase the frequency of storm damage to lagoons, estuaries and coral reefs.

  In India, the Lakshadweep Islands with a maximum height of four meters above the sea level is vulnerable. Some of the cities like Mumbai may be saved by heavy investment on embankments to prevent inundation.

  Life of millions of people who have build homes in the deltas of Ganges, the Nile, the Mekong, the Yangtze and the Mississippi rivers will be affected, by the sea level rise.
- **Effects on human health:** The global warming will lead to changes in the rainfall pattern in many areas, thereby affecting the distribution of vector-borne diseases like malaria, filariasis and elephantiasis.

  Areas which are presently free from diseases like malaria may become the breeding ground for the vectors of such diseases. The areas likely to be affected in this manner are Ethiopia, Kenya and Indonesia. Warmer temperature and more water stagnation will favour breeding of mosquitoes, snails and some insects, which are the vectors of such diseases.

  Higher temperature and humidity will increase/aggravate respiratory and skin diseases.
- **Effects on agriculture:** There are different views regarding the effect of global warming on agriculture. It may show positive or negative effects on various types of crops in different regions of the world. Tropical and subtropical regions will be more affected since the average temperature in these regions is already on the higher side. Even a rise of 2°C may be quite harmful to crops. Soil





NOTES

NOTES

moisture will decrease and evapo-transpiration will increase, which may drastically affect wheat and maize production.

Increase in temperature and humidity will increase pest growth like the growth of vectors for various diseases. Pests will adapt to such changes better than the crops.

To cope up with the changing situation, drought resistant, heat resistant and pest resistant varieties of crops have to be developed.

### Acid Rain

Oxides of sulphur and nitrogen that rise from industrial operations and fossil fuel combustion are the major sources of acid forming gases. Acid forming gases are oxidized over several days by which time they travel several thousand kilometers. In the atmosphere, these gases are ultimately converted into sulphuric and nitric acids. Hydrogen chloride emission forms hydrochloric acid. The end product of these acids is acidic rain.

Acid rain is only one component of acidic deposition. Acidic decomposition is the total wet acidic deposition (acid rain) and dry deposition.

Rainwater is turned acidic when its pH falls below 5.6. In fact, clean or natural rainwater has a pH of 5.6 at 20°C because of formation of carbonic acid due to the dissolution of $CO_2$ in water.

In the absence of rain, dry deposition of acid may occur. Acid forming gases like oxides of sulphur and nitrogen and acid aerosols get deposited on the surface of water bodies, vegetation, soil and other materials. On moist surfaces or in liquids, these acid forming gases can dissolve and form acids similar to that formed in acid rain.

### Effects of acid rain

Acid rain causes a number of harmful effects below pH 5.1. The effects are visible even at pH less than 5.5.

- It causes deterioration of buildings, especially made of marble, e.g., monuments like Taj Mahal. Crystals of calcium and magnesium sulphate are formed as a result of corrosion caused by acid rain.
- It damages stone statues. Acidic rains have dissolved parts of invaluable stone statues in Greece and Italy.
- It damages metals and costings
- Aquatic life especially fish are badly affected by lake acidification
- Aquatic animals suffer from toxicity of metals such as aluminium, mercury, manganese, zinc and lead which leak from the surrounding rocks due to acid rain
- It results in reproductive failure, and killing of fish
- It damages foliage and weakens trees
- It makes trees more susceptible to stresses like cold temperature, drought, etc. Many insects and fungi are more tolerant to acidic conditions, and hence, they can attack the susceptible trees and cause diseases





NOTES

### Control of acid rain

- Emission of $SO_2$ and $NO_2$ from industries and power plants should be reduced by using pollution control equipment
- Liming of lakes and soils should be done to correct the adverse effects of acid rain
- Coating of protective layer of inert polymer should be given in the interior of water pipes

## 7.4.12 Wasteland Reclamation

Economically unproductive lands suffering from environmental deterioration are known as wastelands. The wastelands include salt-affected lands, sandy areas, gullied areas, undulating uplands, barren hill-ridges, etc. Snow covered areas, glacial areas and areas rendered barren after *Jhum* cultivation are also included in wastelands. More than half of our country's geographical area (about 175 million ha) is estimated to be wasteland, thus indicating the seriousness of the problem for a country like ours which has to support one-sixth of the world's population.

Maximum wasteland areas in our country lie in Rajasthan (36 million ha) followed by Madhya Pradesh and Andhra Pradesh. In Haryana, the wastelands cover about 8.4 per cent of the total land area and most of it comprises saline, sodic or sandy land areas.

Wastelands are formed by natural processes, which include undulating uplands, snow-covered lands, coastal saline areas and sandy areas or by anthropogenic (man-made) activities leading to eroded, saline or waterlogged lands.

### Wasteland reclamation practices

Wasteland reclamation and development in our country falls under the purview of Wasteland Development Board, which works to fulfill the following objectives:

- To improve the physical structure and quality of marginal soils
- To improve the availability of good quality water for irrigating these lands
- To prevent soil erosion, flooding and landslides
- To conserve the biological resources of land for sustainable use

## 7.4.13 Strategies for Ensuring Environment-Friendly Business Operations

Instituting environment-friendly practices does not mean sacrificing your competitive edge. Business owners are realizing that they can make a bigger impact by changing their business policies than by changing their personal behaviour, and this has lead to a change in corporate culture over the last few years that has resulted in a notable environmental impact.

In the past, efforts to institute eco-friendly business practices were admirable, but these efforts appear negligible compared to the changes that are being made today. Minimizing the consumption of paper products and electricity are still effective ways for companies to save money and help the environment at the same time, but many companies are stepping outside these standardized boundaries to effect big changes.

NOTES

Many companies are choosing to enact organization-wide policies that take enormous effort and patience, and the results of these efforts are just filtering in. Leaving the choice in the hands of consumers often results in poor choices, but when companies choose to be careful about what they produce and how they produce it, the impact can be tremendous.

In the Great Lakes area of the United States and Canada, wind energy is becoming an increasingly viable source of power for companies of all sizes. Wind powered electricity costs only slightly more than standard electricity for the consumer, and many conscientious business owners are willing to pay the premium. For the producers of electricity, using wind power makes sense as a way to help reduce reliance on fossil fuels. Reducing dependence on one commodity allows the producers to further diversify and create a more sustainable financial future for their company. Thus, both the producers and consumers of wind powered electricity benefit from the creation of this clean, environment-friendly energy source.

Simple changes in business practices and purchasing can make an enormous impact on the environment, and the cost of the choices is usually minimal or non-existent. Whether or not you believe that carbon emissions are the culprit behind our increasingly unstable global climate, there are simple changes that can be made that would make a big impact on the health of our planet.

For new businesses that are still finding their feet in a highly competitive market, the size of their profit margin may be more of a concern than the size of their carbon footprint.

The advent of the Internet era has enabled businesses to cut costs whilst also building an environment-friendly philosophy across the organization, however, traditional energy-saving methods should not be ignored either. Some of the easiest methods are as follows:

- **Keep travel to a minimum:** One of the biggest expenses many companies have is transporting people for meetings. A lot of valuable time is wasted 'in transit' at airports and stations and 'time', which means wastage of money. However, with Internet technology, travel can be kept to a minimum. Using VoIP software, instant messaging, and e-mail and telephone conferencing services, it is much cheaper than flying a team of executives cross-country for a one-hour meeting.
- **Use web-based technology:** Companies that have clients or other offices across the world should use web-based technology to keep costs down. Documents can be stored remotely in a secure central hub in cyberspace, with passwords enabling only authorized people to gain access. Using such a technology reduces the need to post or courier or fax any documents.

  Remote storage saves on office space, furniture and staff time. With encryption it is just as safe as physical storage.
- **Run a paperless office:** Similarly, digital storage is a cost-effective and environmentally-friendly way of managing important documents. Anything from portable USB hard-drives to large, networked storage facilities can cater for companies of all sizes, which cuts out needless paper waste.
- **When printing is unavoidable:** In case printing is unavoidable, ensure a printer is compatible with refillable ink cartridges and has a duplex printing function. Many print shops will give significant discounts on fresh cartridges in exchange for your used cartridges. And by printing on both sides of a piece of paper, you can halve the amount of paper you need to use.
- **Online marketing:** Marketing is central to the success of any business. While hard copies of marketing material will always have a place, it is important to optimize online operations. A company's website is often the first port of call for customers—so it must be informative, well presented and easy to navigate. It is required to target new customers on forums, make business listings, and most importantly, have electronic versions of information brochures—many customers prefer mailing information. Having a strong online marketing strategy will boost sales, cut costs and also save a lot of money on printing.
- **Turn off equipment:** Many companies leave their computers on stand-by overnight and at weekends, which is a massive waste of energy. Instill a company-wide policy that insists that everyone must turn their computers off if not in use. The same applies to coffee machines, heaters, etc.
- **Energy-saving light bulbs:** Energy saving light bulbs are very effective, they conserve energy and thus help the environment. They use up to 80 per cent less electricity than a standard bulb, but produce the same amount of light.

Through a combination of Internet technology and a genuine desire to make a difference, all businesses—new or otherwise—can adopt environment-friendly principles and reduce needless financial waste at the same time.

### Green Funding

Green funding is a mutual fund or other investment vehicle that will only invest in those companies that are deemed socially conscious in their business dealings or directly promote environmental responsibility. A green fund can come in the form of a focused investment vehicle for companies engaged in environmentally supportive businesses, such as alternative energy, green transport, water and waste management, and sustainable living.

A green fund's strategy can be based on avoiding negative company criteria (businesses such as guns, alcohol, gambling, pornography, animal testing, etc.), choosing positive company criteria (environmental programs, energy conservation, fair trade, etc.), or a combination of both strategies.

Based on performance, it is not yet clear whether green funds and socially responsible investing can consistently create better returns for investors. However, they do represent a proactive step towards environmental consciousness, which many investors appreciate.

Socially conscious investing is on the rise, which is due largely to increased worldwide exposure to the issue, as well as increased federal funding for alternative energy and other programs.

## 7.4.14 Environmental Legislations

India is the first country in the world to have made provisions for the protection and conservation of environment in its constitution. On 5 June 1972, environment was first discussed as an item of international agenda in the UN Conference on Human Environment in Stockholm and thereafter, 5 June is celebrated all over the world as the World Environment Day. Soon after the conference, our country took substantive legislative steps for environmental protection. The Wildlife (Protection) Act was passed

NOTES

in 1972, followed by the Water (Prevention and Control of Pollution) Act, 1974, the Forest (Conservation) Act, 1980, Air (Prevention and Control of Pollution) Act, 1981 and subsequently the Environment (Protection) Act, 1986.

## Constitutional Provisions

The provisions for environmental protection in the constitution were made through the forty-second amendment as follows:

Article 48A of the constitution provides: 'The state shall endeavour to protect and improve the environment and to safeguard forests and wildlife of the country.'

Article 51A (g) provides: 'It shall be the duty of the every citizen of India to protect and improve the natural environment including forests, lakes, rivers and wildlife and to have compassion for living creatures.'

Thus, our constitution includes environmental protection and conservation as one of our fundamental duties.

Some of the important Acts passed by the Government of India are discussed as follows:

### 1. Wildlife (Protection) Act, 1972

The major activities and provisions in the Act can be summed up as follows:

- Defines the wildlife related terminology
- Provides for the appointment of wildlife advisory board, wildlife warden, their powers, duties, etc.
- Under the Act, comprehensive listing of endangered wildlife species was done for the first time and prohibition of hunting of the endangered species was mentioned
- Protection to some endangered plants
- Provides for setting up of national parks, wildlife sanctuaries, etc.
- Provides for the constitution of central zoo authority
- There is provision for trade and commerce in some wildlife species with license for sale, possession and transfer
- Imposes a ban on the trade or commerce in scheduled animals
- Provides for legal powers to officers and punishment to offenders
- Provides for captive breeding programme for endangered species

Several conservation projects for individual endangered species like Lion (1972), Tiger (1973), Crocodile (1974) and Brown antlered Deer (1981) were stated under this Act. The Act is adopted by all states in India except J & K, which has its own Act.

Some of the major drawbacks of the Act include mild penalty to offenders, illegal wildlife trade in J & K, personal ownership certificate for animal articles like tiger and leopard skins, no coverage of foreign endangered wildlife, pitiable condition of wildlife in mobile zoos and little emphasis on protection of plant genetic resources.

### 2. Forest (Conservation) Act, 1980

This Act deals with the conservation of forests and related aspects. Except for J & K, the Act is adopted all over India. The Act covers under it, all types of forests including reserved forests, protected forests or any forested land irrespective of its ownership.





NOTES

The outstanding aspects of the Act are as follows:

- The state government has been empowered under this Act to use the forests only for forestry purposes. If at all it wants to use it in any other way, it has to take prior approval of the Central Government, after which it can pass orders for declaring some part of reserve forest for non-forest purposes (e.g. mining) or for clearing some naturally growing trees and replacing them by economically important trees (reforestation)
- It makes provision for conservation of all types of forests and for this purpose there is an advisory committee which recommends funding for it, to the Central Government
- Any illegal non-forest activity within a forest area can be immediately stopped under this Act

Non-forest activities include clearing of forest land for cultivation of any type of plants/crops or any other purpose (except re-afforestation). However, some construction work in the forest for wildlife or forest management is exempted from non-forest activities (e.g. fencing, making water-holes, trench, pipelines, check-posts, wireless communication, etc.) Penalties include a fine of up to ' 500 per offence and imprisonment of up to six months.

### 3. Amendment in the Forest Act, 1992

- In 1992, some amendment was made in the Act which made provisions for allowing some non-forest activities in forests, without cutting trees or limited cutting with prior approval of the Central Government, These activities are the setting of transmission lines, seismic surveys, exploration, drilling and hydroelectric projects. The last activity involves large-scale destruction of forests, for which prior approval of the Centre is necessary.
- Wildlife sanctuaries, national parks, etc., are totally prohibited for any exploration or survey under this Act without prior approval of the Central Government, even if no tree-felling is involved.
- Cultivation of tea, coffee, spices, rubber and plants which are cash-crops, are included under non-forestry activity and not allowed in reserve forests.
- Even cultivation of fruit-bearing trees, oil-yielding plants or plants of medicinal value in forest area need to be first approved by the Central Government. This is because newly introduced species in the forest area may cause an imbalance in the ecology of the forest. If the species to be planted is a native species, then no prior clearance is required.
- Tusser cultivation (a type of silk-yielding insect) in forest areas by tribals as a means of their livelihood is treated as a forestry activity as long as it does not involve some specific host tree like *Asan* or *Arjun*. This is done in order to discourage monoculture practices in the forests which are otherwise rich in biodiversity.
- Plantation of mulberry for rearing silkworm is considered a non-forest activity. The reason is the same as described earlier.
- Mining is a non-forestry activity and prior approval of the Central Government is mandatory. The Supreme Court in a case T.N. Godavarman Thirumulkpad

vs. Union of India (1997) directed all on-going mining activities to be ceased immediately in any forest area of India, if it has not obtained prior approval of the Central Government.

- Removal of stones, *bajri*, boulder, etc., from riverbeds located within the forest area fall under non-forest activity.
- Any proposal sent to the Central Government for non-forest activity must have a cost-benefit analysis and Environmental Impact Statement (EIS) of the proposed activity with reference to its ecological and socio-economic impacts.

Thus, the Forests (Conservation) Act has made ample provisions for conservation and protection of forests and preventing deforestation.

## 4. Water (Prevention and Control of Pollution) Act, 1974

It provides for the maintenance and restoration of the wholesomeness of water by the prevention and control of its pollution. Pollution is referred to as the contamination of water, or a change of the physical, chemical or biological properties of water, or such discharge that can probably result in a trouble or cause the water to be detrimental or injurious to public health and safety or dangerous for any other use or for marine plants and other life forms or animal life.

The way in which water pollution has been defined, has thus covered all likely agents in water that can probably cause any harm or have a potential to harm any kind of life form in any way.

The main highlights and provisions of the Act can be summarized as follows:

- It provides for maintenance and restoration of the quality of all types of surface and groundwater
- It provides for the establishment of Central and State Boards for pollution control
- It confers them with powers and functions to control pollution. The Central and State Pollution Control Boards are widely represented and are given comprehensive powers to advise, coordinate and provide technical assistance for prevention and control of pollution of water
- The Act provides for funds, budgets, accounts and audit of the Central and State Pollution Control Boards
- The Act also provides for a variety of penalties for the defaulters and procedure for the same

The most important regulatory associations are the Pollution Control Boards that have been assigned different types of duties and powers.

## 5. Central Pollution Control Board (CPCB)

The board is supposed to:

- Advise the Central Government in matters related to the prevention and control of water pollution
- Coordinate the activities of State Pollution Control Boards and provides them technical assistance and guidance
- Organize training programmes to prevent and contain pollution





- Set up wide-ranging programmes on pollution-related issues, through mass media.
- Collate, compose and publish scientific and informative statistics related to pollution
- Prepare manuals for treatment and dumping of sewage and trade waste matter.
- Dictate norms for water quality parameters
- Design countrywide programmes for prevention, control or abatement of pollution
- Set up and identify laboratories for examination of water, sewage or trade waste matter samples

The State Pollution Control Boards also have similar functions to be executed at the state level and are governed by the directions of CPCB.

- The board gives recommendations to the state government, in terms of the location of any industry that is likely to contaminate a stream or a well.
- It lays down standards for effluents and is empowered to take samples from any stream, well or trade effluent or sewage passing through an industry.
- The State Board is empowered to take legal samples of trade effluent in accordance with the procedure laid down in the Act. The sample taken in the presence of the occupier or his agent is divided into two parts, sealed, signed by both the parties and sent for analysis to some recognized lab. If the samples do not conform to the prescribed water quality standards (crossing maximum permissible limits), then 'consent' is refused to the unit.
- Every industry has to obtain consent from the Board (granted for a fixed duration) by applying on a prescribed proforma providing all technical details, along with a prescribed fee, following which analysis of the effluent is carried out.
- The Board suggests efficient methods of utilization, treatment and disposal of trade effluents.

The Act has made detailed provisions regarding the power of the Boards to obtain information, take trade samples, restrict new outlets, restrict expansion, enter and inspect the units and sanction or refuse consent to the industry after effluent analysis.

While development is necessary, it is all the more important to prevent pollution which can jeopardize the lives of people. Installation and proper functioning of effluent treatment plants in all polluting industries is a must for checking the pollution of water and land. Despite certain weaknesses in the Act, the Water Act has ample provisions for preventing and controlling water pollution through legal measures.

Penalties include a fine of up to '5000 a day for first offence and/or imprisonment from one to six years. On repeated offence, the penalty goes up to '10000 a day and/or imprisonment from one to six years.

## 6. The Air (Prevention and Control of Pollution) Act, 1981

The salient features of the act are as follows:

- It provides for prevention control and abatement of air pollution.
- Air pollution refers to the existence of any solid, liquid or gaseous substance (inclusive of noise) in the atmosphere in a proportion that is likely to be harmful to human beings or any other living creatures or plants, or property or environment.

NOTES

- Noise pollution has been inserted as pollution in the Act in 1987.
- Pollution control boards at the central or state level have the regulatory authority to implement the Air Act. Just parallel to the functions related to the Water (Prevention and control of pollution) Act, the boards perform similar functions related to the improvement of air quality.

  The boards have to check whether or not the industry strictly follows the norms or standards laid down by the board under Section 17 regarding the discharge of emission of any air pollutant. Based upon analysis report, consent is granted or refused to the industry.
- Just like the Water Act, the Air Act has provisions for defining the constitution, power and function of pollution control boards, funds, accounts, audit, penalties and procedures.
- Section 20 of the Act has provision for insuring emission standards for automobiles. Based upon it, the state government is empowered to issue instructions to the authorities in charge of registration of motor vehicles (under Motor Vehicle Act, 1939) that is bound to comply with such instructions.
- As per section 19, in consultation with the state pollution control board, the state government may declare an area within the state as 'Air Pollution Control Area' and can prohibit the use of any fuel other than the approved fuel in the area causing air pollution. No person shall without prior consent of the State Board operate or establish any industrial unit in the 'Air Pollution Control Area'.

The Water and Air Acts have also made special provisions for appeals. Under Section 28 of the Water Act and Section 31 of the Air Act, a provision for appeals has been made. An appellate authority consisting of a single person or three persons appointed by the head of the state, the Governor is constituted to hear such appeals as filed by some aggrieved parties due to some order made by the state board within thirty days of passing the orders.

The appellate authority, after giving the appellant and the state board, an opportunity of being heard, disposes off the appeal as expeditiously as possible.

Penalties include a fine of up to ₹ 5000 a day and/or imprisonment for up to one and a half to six years for first offence and fine of ₹ 10000 a day and imprisonment of one and a half to six years.

### 7. The Environment (Protection) Act, 1986

The Act came into force on 19 November, 1986. The Act is applicable throughout India. A few of the terms related to environment have been described as follows in the Act:

- Environment comprises water, air and land and the interrelationship that exist among and between them and human beings, all other living organisms and property.
- Environmental pollution is referred to the existence of any solid, liquid or gaseous matter in such quantity that can be, or has a tendency to be harmful to the environment.





NOTES

- Hazardous substance can be defined as any material or preparation which can be detrimental to human beings or other life forms, or property, or the environment, through its physico-chemical properties or usage.

This Act has empowered the Central Government in such a way that it has the authority to take appropriate action for the protection and improvement of the environment, while the state government has the power to manage the actions. The most important function of Central Government under this act includes setting up of:

- The standards of quality of air, water or soil for a variety of regions and objectives.
- The most permissible levels of intensity of different types of environmental pollutants for different areas.
- The procedures and safeguards for the handling of hazardous substances.
- The prohibition and restrictions on the handling of hazardous substances in different areas.
- The prohibition and restriction on the location of the industries and to carry on processes and operations in different areas..
- The procedures and safeguards for the prevention of accidents which may cause environmental pollution and providing for remedial measures for such accidents.

The power of entry and inspection, power to take samples, etc., under this Act lies with the Central Government or any officer empowered by it.

For the purpose of protecting and improving the quality of the environment and preventing and abating pollution, standards have been specified under Schedule I-IV of Environment (Protection) Rules, 1986, for emission of gaseous pollutants and discharge of effluents/waste water from industries.

These standard vary from industry to industry and also vary with the medium into which the effluent is discharged or the area of emission.

## 7.4.15 Enforcement of Environmental Legislation: Major Issues

We have seen that there are a number of important environmental laws in the form of Acts for safeguarding our environmental quality. But in spite of these acts, we find that we are not able to achieve the target of bringing 33 per cent of our land cover under forests. Still we are losing our wildlife. The rivers have been turned into open sewers in many places and the air in our big cities is badly polluted. The status of our environment shows that there are drawbacks in environmental legislations and problems in their effective implementation.

### Public Environmental Awareness

Public awareness about environment is at the stage of infancy. Of late, some awareness has taken place related to environmental degradation, pollution, etc., but incomplete knowledge and ignorance about many aspects has often led to misconceptions.

Development has paved the path for rise in the levels or standards of living, but it has simultaneously led to serious environmental disasters. Issues related to environment have been often branded as antidevelopment. The wisdom lies in maintaining a balance between our needs and supplies so that the delicate ecological balance is not disrupted.

NOTES

Some of the main reasons responsible for widespread environmental ignorance can be detailed as follows:

1. Our courses in science, technology, economics, etc., have so far failed to integrate the knowledge in environmental aspects as an essential component of the curriculum.
2. Our planners, decision-makers, politicians and administrators have not been trained so as to consider the environmental aspects associated with their plans.
3. In a zeal to go ahead with some ambitious development projects, quite often, there is a purposeful concealment of information about environmental aspects.
4. There is greater consideration of economic gains and issues related to eliminating poverty by providing employment that overshadows the basic environmental issues.

## Methods to Propagate Environmental Awareness

There is immense need for environmental awareness. It is to be fashioned with the help of formal and informal education to all sections of the society. It is important that everyone is aware of it because 'environment belongs to everyone' and 'every single person matters' where the environment is to be conserved or protected.

People can be made aware of the environmental issues through different steps and techniques to be used in different parts of the society, as follows:

1. **Education can be used in the case of students**

   Environment education should begin for students in their childhood. These studies are now being incorporated at all stages in schools and colleges as per the orders of the Supreme Court.

2. **Masses can be environmentally educated through mass-media**

   The role of media in educating masses via articles, rallies, campaigns, street plays and TV serials is critical. This will simultaneously attract people of every age group.

3. **Among the planners, decision-makers and leaders**

   It is very important that these groups of people are essentially oriented and trained through specifically planned workshops and training programmes.

## Role of Non-government Organizations (NGOs)

The Chipko Movement for conservation of trees by Dasholi Gram Swarajya Mandal in Gopeshwar or the Narmada Bachao Andolan organized by Kalpvariksh, are a few of the prominent movements, where NGOs have been significantly active in the society for the conservation of environment.

The Bombay Natural History Society (BNHS), the World Wide Fund for Nature-India (WWF-India), Kerala Sastra Sahitya Parishad, Center for Science and Environment (CSE) and many others are playing a significant role in creating environmental awareness through research as well as extension work. The recent report by CSE on more than permissible limits of pesticides in the cola drinks sensitized the people all over the country.





NOTES

Before we all take up the task of environmental protection and conservation, we have to be environmentally educated and aware. It can therefore said, 'If you want to act green, first think green.'

## Integration of Trade and Environmental Policy

During the 1960s there was a growing awareness of the complex, and often negative, environmental effects of development projects and policies (e.g., changing land use due to industrialization and urbanization, construction of roads, mining, providing water or electricity to large number of people and so on). These developments led to environmental degradation of an undesirable degree. Their effect has grown through the past few decades. For example, the relatively poor water quality and ever increasing stress on water resources, deteriorating air quality due to industries, power plants and traffic, urban congestion, untreated sewerage, industrial effluents, lack of proper solid waste and hazardous waste disposal are threatening our health and environment as never before.

In this century, many cities in the developing world are expected to double or grow even more in size, due to population growth and migration of people. This is bound to increase environmental, social and economic problems. A world water crisis is looming ahead and it is said that the next world war may be fought for water.

You know that environmental degradation is a significant problem in South Asian countries. This has been associated with rapid urbanization, poor sanitation infrastructure, unregulated industrialization, deforestation, etc. For example, the construction of large dams, hydropower schemes, diversion canals and vast irrigation systems have caused ecological disturbances in the river ecosystems of these countries. These systems are poisoned by industrial effluents and agricultural runoffs. In India, many rivers and water bodies are already dead, massive deforestation has caused severe soil erosion problems and reduction in biodiversity. Pollution from industries and the transport sector is at unacceptable levels, especially in the metropolitan cities.

## Integrated Rural Development Programme

The World Bank defines Rural Development as 'improving the living standards of the masses of the low income population residing in rural areas making the process of rural development sustainable'. Mahatma Gandhi had declared that political emancipation had no meaning unless it lifted the people from poverty and ignorance. He enunciated a 13-point programme of rural development involving basic education, village industries, Khadi and other minimum requirements of the rural areas to improve the quality of life there.

After independence, the national government adopted these ideas to launch a planned rural development programme. The Integrated Rural Development Programme was initiated in 1977 to generate employment among the rural population as single largest anti-poverty programme for direct assistance by the government to the rural people. Its aims included:

- Development of production potential of each area and utilization and upgrading of available human skills
- Development of cottage, poultry, fishery, forestry and cottage industries to raise the living standards of the poor villagers

NOTES

In addition, several other programmes were initiated in different Five Year Plans to promote rural development. They include industrialization of the backward areas, intensive development of agriculture, extension of irrigation, development of roads and road transport, provision for universal education, improvements in conditions of living and water supply, planning for tribal development, etc. Several developmental programmes were also initiated for drought prone and flood prone areas.

The following developmental initiatives by the government deserve special mention:

**1. Area specific programmes**

Integrated Area Development Programme (IADP), Whole Villages Development Programme (WVDP), Command Area Development Programme (CAD), Drought Prone Area Programme (DPAP) and Desert Development Programme (DDP).

**2. Target group specific programmes**

Small Farmers Development Agency (SFDA), Marginal Farmers and Landless Agency (MFLA), Antyodaya, and Integrated Tribal Development Project (ITDP).

**3. Employment programmes**

Crash Scheme for Rural Employment (CSRE), Food For Works Programme (FFWP), Pilot Intensive Rural Employment Programme.

**4. Development of agro-industries**

In the First Five Year Plan, the agriculture development and village industries were taken up as the twin development issues. It was visualized that increased agricultural produce will raise farmers' incomes and opportunities for processing raw materials through village cottage industries. The planning commission covered, among others, these village industries for development: khadi, coir, oil, fisheries, sericulture, forests, dairying, leather, hand-made paper and horticulture. The subsequent plans also stressed the role of the agriculture-based village industries. The objectives were:

- To create immediate and long-term employment on a large scale at a relatively small capital cost
- To meet a substantial part of increased demand for goods by the large-scale industries and its integration with the small-scale industries
- To facilitate mobilization of resources of capital and skill
- These policies are now better appreciated because the products of village and craft industries have gradually found markets even among the urban elite.

**5. Employment programmes**

Pilot Intensive Rural Employment Programme (PIREP), National Rural Employment Programme (NREP), Rural Landless Employment Guarantee Programme (RLEGP), Jawahar Rojgar Yojana (JRY) and Training for Rural Youth for Self Employment (TRYSEM).



**6. Social welfare programmes**

National Adult Education Programme (NAEP), Minimum Needs Programme (MNP), Applied Nutritional Programme (ANP) and Integrated Child Development Project (ICDP).

### Check Your Progress

12. What are the two aspects that effect environment?
13. What are the strategies that can be adopted to conserve water?
14. What is acid rain?
15. What are the measures to be taken to slow down global warming?
16. What are the various stages and methods that can be used for raising environmental awareness among the different sections of the society?
17. A _____ compares the estimated costs of a project with the benefits that will be achieved.

### ACTIVITY

Enlist some successful family planning schemes initiated by the Indian Government.

### Did You Know

The UN climate conference in Doha, agreed to a treaty which restricts the emission of greenhouse gas of some developed countries and reinforced its earlier decision to adopt a new global climate pact by 2015.

## 7.5 SUMMARY

In this unit, you have learnt that:

- The rapid and excessive increase in population affects the quality of life.
- The increase in the size of family decreases the quality of food, health, education, employment and environment.
- Poverty, illiteracy, physical, social, health environments, and young generation are the factors on which quality of life is dependent.
- A pattern which sets limit for any community's fertility behaviour is called norms.
- Family size affects physical growth, mortality, economy, cultural and social development of family.
- A small family has many advantages for the health and development of children as well as for the development of community and nation.



NOTES

NOTES

- There are various ways and devices for controlling the birth and regulate the number and spacing of human births.
- Physical, chemical and mechanical methods are used in family planning programmes.
- Biodiversity refers to the assortment and variability among all groups of living organisms and the ecosystem complexes in which they occur. The enormous variability in the flora and fauna in India is due to the different climatic conditions and topography of the country.
- India ranks tenth among the plant rich countries and eleventh in terms of the number of endemic species of higher vertebrates. Also, India is one of the twelve mega-diversity countries in the world. The loss of natural habitat and poaching are the major threats to biodiversity. There are two approaches to conservation of biodiversity, in-situ conservation and ex-situ conservation.
- Genetic biodiversity is the basic source of biodiversity. Genes found in organisms can form enormous number of combinations, each of which gives rise to some variability. Genes are the basic units of hereditary information, transmitted from one generation to other. When the genes within the same species show different versions, due to new combinations, it is called genetic variability.
- Species biodiversity is the variability found within the population of a species or between different species of a community. It represents broadly the species richness and their abundance in a community.
- Ecosystem biodiversity is the diversity of ecological complexity showing variations in ecological niches, tropic structure, food webs, nutrient cycling, etc. Ecosystems also show variations with respect to physical parameters like moisture, temperature, altitude and precipitation. Thus, there occurs tremendous diversity within the ecosystems, along these gradients.
- Biodiversity in terms of its commercial utility, ecological service, social and aesthetic value has enormous importance. We are benefited by other organisms in innumerable ways. Sometimes, we come to know and appreciate the value of an organism only after it is lost from this earth. Very small, insignificant, useless looking organism may play a crucial role in the ecological balance of the ecosystem or may be a potential source of some invaluable drug for dreaded diseases like cancer or AIDS.
- Every country is characterized by its own biodiversity depending mainly on its climate. India has a rich biological diversity of flora and fauna. Overall, 6 per cent of the global species are found in India. It is estimated that India ranks tenth among the plant rich countries of the world, eleventh in terms of the number of endemic species of higher vertebrates and sixth among the centres of diversity and origin of agricultural crops.
- India is one of the twelve mega-diversity countries in the world. The Ministry of Environment and Forests, Government of India (2000) records 47,000 species of plants and 81,000 species of animals which is about 7 per cent and 6.5 per cent respectively of global flora and fauna. These major groups of species include endemism, centre of origin, marine diversity, etc.
- Areas which exhibit high species richness as well as high species endemism are termed as hot spots of biodiversity. Species which are restricted only to particular areas are known as endemic. India shows a good number of endemic species. About 62 per cent of amphibians and 50 per cent of lizards are endemic to India. Western Ghats are the site of maximum endemism.
- The United Nations Conference on Environment and Development at Rio in 1992 put biological diversity on the international agenda by signing the Convention on Biological Diversity (CBD). This convention addresses many issues ranging from forests, agriculture to Intellectual Property Rights (IPRs).
- Extinction or elimination of a species is a natural process of evolution. In the geologic period, earth has experienced mass extinctions. During evolution, species have died and have been replaced by others. However, the rate of loss of species in the geologic past has been a slow process, keeping in view the vast span of time going back to 444 million years. The process of extinction has become particularly fast in the recent years of civilization.
- Sustainable development is a concept that signifies that the rate of consumption or the use of natural resources should be approximate to the rate at which these resources can be substituted or replaced. It requires what a nation or society should be able to satisfy its requirements-social, economic and others-without undermining the interest of our future generations.
- The fundamentals of environment and sustainable development are population and its implications. There are two aspects that effect environment: population growth and economic development. Human settlement areas, land resources and forest developments are some issues which need sustainable development.
- There are urban problems related to energy, as the energy requirement of an urban population is much higher than that of the rural ones. Similarly, water being one of the most precious and indispensable resources, it needs to be conserved. Rainwater harvesting is a technique of increasing the recharge of ground water by capturing and storing rainwater.
- Watershed is directly involved in sustained food production, water supply for irrigation, power generation, and transportation as well as for influencing sedimentation and erosion, floods and droughts. Thus, management of watersheds by treating them as basic functional unit is extremely important.
- Change in climate may upset the hydrological cycle resulting in floods and droughts in different regions of the world, sea level rise, changes in agricultural productivity, famines and death of humans.
- Troposphere, the lower most layer of the atmosphere traps heat by natural process due to the presence of certain gases. This effect is greenhouse effect and it is similar to warming effect.
- There is great necessity for environmental awareness; it is to be inculcated by providing formal and informal education to every section of the society.

## 7.6 KEY TERMS

- **Biodiversity:** Refers to the variety and variability among all groups of living organisms and the ecosystem complexes in which they occur.
- **Ecosystem biodiversity:** The diversity of ecological complexity showing variations in ecological niches, tropic structure, food webs, nutrient cycling, etc.

NOTES

- **Genetic biodiversity:** The basic source of biodiversity born of the genes found in organisms that can form enormous number of combinations, each of which gives rise to some variability.
- **Species biodiversity:** The variability found within the population of a species or between different species of a community; represents broadly the species, richness and their abundance in a community.
- **In-situ conservation:** Means to conserve the biodiversity within the habitat and on site.
- **Ex-situ conservation:** Means off-site protection of biodiversity, i.e., the process of protecting an endangered species of plant or animal by removing it from an unsafe or threatened habitat and placing it under human care.
- **Hot spots:** The areas which exhibit high species richness as well as high species Endemism.
- **Anthropocentric worldview:** This view guides most industrial societies and puts human beings at the centre giving them the highest status.
- **Climate:** The average weather of an area; the general weather conditions, seasonal variations and extremes of weather in a region.
- **Environmental ethics:** indicates the issues, principles and guidelines related to the interactivity of humans with their environment.
- **Global warming:** The process wherein troposphere, the lower most layer of the atmosphere, traps heat by natural processes due to the presence of certain gases leading to the warming effect observed in the horticultural greenhouse made of glass.
- **Rainwater harvesting:** A technique of increasing the recharge of groundwater by capturing and storing rainwater done by constructing special water-harvesting structures like dug wells, percolation pits, lagoons and check dams.
- **Watershed:** The land area from which water drains under gravity to a common drainage channel, i.e., a delineated area with a well-defined topographic boundary and one water outlet.
- **Sustainable development:** A concept that signifies that the rate of consumption or the use of natural resources should be approximate to the rate at which these resources can be substituted or replaced.
- **Cost–benefit analysis:** Compares the estimated costs of a project with the benefits that will be achieved.
- **Green funding:** A mutual fund or other investment vehicle that will only invest in those companies that are deemed socially conscious in their business dealings or directly promote environmental responsibility.
- **Watershed:** The land area from which water drains under gravity to a common drainage channel.

## 7.7 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Explosive growth in human population causes a number of serious problems like food-scarcity, overcrowding, poverty, increasing consumption, stress on common social facilities, encroachment on monuments, and stress on civic services.





NOTES

2. Overpopulation, unequal distribution of resources, inability to meet the cost of living, inadequate education and employment, degradation of environment, demographic trends and welfare incentives are primary causes of poverty.
3. (i) Increased
   (ii) Slash and burn cultivation
   (iii) Ecology
4. Genes
5. True
6. When the genes within the same species show different versions, due to new combinations, it is called genetic variability. For example, all rice varieties belong to the species Oryza sativa, but there are thousands of wild and cultivated varieties of rice which show variations at the genetic level and differ in their colour, size, shape, aroma and nutrient content of the grain.
7. Every country is characterized by its own biodiversity depending mainly on its climate. India has a rich biological diversity of flora and fauna. Overall, 6 per cent of the global species are found in India. It is estimated that India ranks tenth among the plant rich countries of the world, eleventh in terms of the number of endemic species of higher vertebrates and sixth among the centres of diversity and origin of agricultural crops.
8. In the Convention of Biological Diversity, 1992, biodiversity has been defined as the variability among living organisms from all sources including inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are a part of.
9. Biodiversity means the variety and variability of all living organisms. Biodiversity constitutes the biological wealth. Biodiversity is at three levels genetic diversity, species diversity and ecosystem diversity.
10. It is also sometimes known as existence value. It involves ethical issues like 'all life must be preserved'. It is based on the concept of 'live and let live'. If we want our human race to survive, then we must protect all biodiversity, because biodiversity is valuable.
11. There are twenty-five such hot spots of biodiversity on a global level, out of which two are present in India, namely the Eastern Himalayas and the Western Ghats.
12. There are two aspects that affect environment:
    (a) Population growth
    (b) economic development.

    The interaction between population growth, resource depletion/environmental damage has been debated. High population growth causes stress on the environment, and there are thinkers, who feel that the blame has to be on economic development, industrial growth and unsustainable economic development are the matters of cause of concern especially in development.
13. The following strategies can be adopted for conservation of water:
    - Decreasing run-off losses: Huge water-loss occurs due to run-off on most of the soils, which can be reduced by allowing most of the water to infiltrate into the soil. This can be achieved by using contour cultivation, terrace

NOTES

farming, water spreading, chemical treatment or improved water-storage system.

- Contour cultivation: Small furrows and ridges across the slopes, trap rainwater and allow more time for infiltration. Terraces constructed in deep soils have large water-storage capacity. On gentle slopes trapped run off is spread over a large area for better infiltration.
- Conservation-bench terracing: It involves construction of a series of benches for catching the run-off water.
- Water spreading is done by channeling or lagoon-leveling. In channeling, the water flow is controlled by a series of diversions with vertical intervals. In lagoon-levelling, small depressions are dug in the area so that there is temporary storage water.
- Chemical wetting agents (Surfactants): These seem to increase the water intake rates when added to normal irrigated soil.
- Surface crop residues, tillage, mulch, animal residues, etc., help in reducing run-offs by allowing more time for water to penetrate into the land.
- Chemical conditioners like gypsum (CaSO4.2H2O) when applied to sodic soils improve soil permeability and reduce run off. Another useful conditioner is HPAN (hydrolyzed poyacrylonitrile).
- Water-storage structures like farm ponds, dug-outs, etc., built by individual farmers can be useful measures for conserving water through reduction of run-offs.

14. Oxides of sulphur and nitrogen that emanate from industrial processes and burning of fossil fuel are the main sources of acid forming gases. Acid forming gases undergo oxidation for more than several days. During this period, they travel several thousand kilometers. In the atmosphere, these gases are finally transformed into sulphuric and nitric acids. Hydrogen chloride emission forms hydrochloric acid. The end product of these acids is acidic rain.
15. To slow down enhanced global warming the following steps will be important:
    - Cut down the current rate of use of CFCs and fossil fuel
    - Use energy more efficiently
    - Shift to renewable energy resources
    - Increase in nuclear power plants for electricity production
    - Shift from coal to natural gas
    - Trap and use methane as a fuel
    - Adopt sustainable agriculture
    - Stabilize population growth
    - Efficiently remove carbon dioxide from smoke stacks
    - Plant more trees
    - Remove atmospheric carbon dioxide by utilizing photosynthetic algae
16. Various sections of the society can be made environmentally aware through a variety of stages and methods. These are as follows:
    (i) By educating students: This kind of education should be provided to students right from their early years. Environmental studies are now being made part of the syllabus in every level of school and college education as per the directives of the Supreme Court.
    (ii) Mass-media can make the masses environmentally aware: Media has a key role to play in the education of masses, with the help of articles, rallies, campaigns, street plays, TV serials, etc. This will appeal all age groups at the same time.
    (iii) Among the planners, decision-makers and leaders: It is very important to give these classes of people necessary orientation and training through specially organized workshops and training programmes.
17. Cost–benefit analysis.





NOTES

## 7.8 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. Define the following:
    (i) Quality of life
    (ii) Mortality
    (iii) Norm
    (iv) Psychological views of quality of life
2. 'Small family affects the man, family and country.' Highlight the statement by showing the effects of small family norms.
3. Define the concept of quality of life. How it is related to population and its growth.
4. Define biodiversity.
5. Explain genetic, species and ecosystem diversity.
6. What are the major threats to biodiversity?
7. What are hot spots of biodiversity? Which are the hot spots found in India?
8. Discuss their salient features.
9. What do you understand by sustainable development? What are the major measures to attain sustainability?
10. Why is urban requirement of energy more than that of the rural requirement?
11. State the measures to conserve water.
12. What is rainwater harvesting? What are the purposes served by it?
13. What is a watershed? Critically discuss the objectives and practices of watershed management.

### Long-Answer Questions

1. Explain the affect of family size on the basic human needs.
2. Discuss the various aspects of the 'quality of life'.
3. Describe the basic elements of the relation between population and quality of life.
4. Elaborate the advantages of the concept of small family norms.
5. What do you mean by consumptive use value, productive use value, social value, ethical value and option value of biodiversity?
6. What are the main causes of man-wildlife conflicts? Discuss the remedial steps that can curb the conflicts.

7. What is meant by in-situ and ex-situ conservation of biodiversity?
8. What do you understand by 'environmental refugees' or 'oustees'? What are the major causes for displacement of native tribal people? Discuss with examples.
9. What are the major issues and problems related to rehabilitation of the displaced tribals? Discuss with examples.
10. What are greenhouse gases and greenhouse effect? How do they contribute to the global warming?
11. Discuss the major implications of enhanced global warming.
12. Write an essay on acid rain.
13. Discuss the various measures for wasteland reclamation.
14. Discuss the salient features of various environmental legislations.
15. Write notes on various authorities established by various laws for prevention and control of environmental pollution.

## 7.9 FURTHER READING

Bell, D.; *The Coming of Past Industrial Society*, Arnold Heinman Publication, New Delhi, 1974.

Bhatia, S.C (ed).; *Papers in Environmental Education*, IUACE, New Delhi, 1984.

Carson,R.; *The Silent Spring*, Fewcett Publication, Greenwich, 1962.

Chakraborty, S.C. (ed); *Value Orientation and Environmental Education*, Vivekananda Nidhi, Calcutta, 1982.

Grossland, R.W., &Moor, S.F.D.; *Environmental Studies Project. An Evaluation Report,* Macmillan, London, 1974.

Sharma, R.A.; *Environmental Education*, Surya Publication, Meerut, 1998.





# UNIT 8 RESEARCH AND DEVELOPMENT IN ENVIRONMENTAL EDUCATION

**Structure**

8.0 Introduction
8.1 Unit Objectives
8.2 UNESCO-UNEP Environmental Education Programmes
8.3 Role of UGC/Universities, NCERT and NGOs for Environmental Education
8.4 Concept of Research
  8.4.1 Steps in Conducting Research
  8.4.2 Research Methods
  8.4.3 Significance of Research in Environmental Education
8.5 Emerging Areas of Research in Environmental Education
8.6 Strategies in Enviornmental Education
8.7 Researches and Projects in Different Field of Environment Education
8.8 Summary
8.9 Key Terms
8.10 Answers to 'Check Your Progress'
8.11 Questions and Exercises
8.12 Further Reading

## 8.0 INTRODUCTION

Several areas of research have emerged in the field of environmental education. Various governmental and non-governmental organizations have contributed in several ways to the development, training and research in environmental education.

In this unit, you will learn about UNESCO-UNEP Environmental Education Programmes, the role of UGC\universities, NCERT, SIE and NGOs in research and development and the emerging areas of research in environmental education.

## 8.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the environmental educational programmes launched by UNESCO-UNEP
- Describe the role played by UGC, NCERT and NGO's for environmental education
- Analyse the emerging areas of research in environmental education
- Explain the concept of research and its methods
- List the environmental projects and programmes carried out by different agencies

## 8.2 UNESCO-UNEP ENVIRONMENTAL EDUCATION PROGRAMMES

The UNESCO-UNEP International Congress on Environmental Education and Training, held in Moscow, USSR, 17-21 August 1987, and attended by more than 300 specialists from 100 countries, prepared a document outlining the international strategy for research and development in the field of environmental education. In 1975, in accordance with the recommendations of the United Nations Conference on the Human Environment (Stockholm, 1972), UNESCO and the United Nations Environmental Programme (UNEP) launched the International Environmental Education Programme (IEEP). In 1977 the Intergovernmental Conference on Environmental Education (Tbilisi, USSR), recognized that there was a strong need in all countries for international cooperation in this field, which required UNESCO and UNEP to carry on their attempts to advance the development of environmental education within the international community.

Environmental education (EE) is incorporated as one of the main objectives of UNESCO's Medium-Term Plan for 1977-1982, which was approved by the UNESCO General Conference at its 19th session (Nairobi, 1976). The Tbilisi Conference believed that EE should be made an important part of the entire educational process and aimed at every class of the population: (i) the general public and non-specialists (ii) scientists and technicians and several others.

The results of the action taken under the UNESCO-UNEP International Environmental Education Programme (IEEP) may be appreciated in three areas.

- Firstly, the efforts of UNESCO-UNEP environmental education programme have created extensive awareness of the need for environmental education.
- Secondly, it assisted in the formulation of concepts and the working out of methodological approaches in this field, which was the main task during the period 1978-1980.
- Thirdly, it facilitated in the incorporation of an environmental dimension in the educational processes of the member countries.

Some of the programmes launched by UNESCO are Man and Biosphere Programme (MAB), the International Hydrological Programme (IHP), the International Geological Correlation Programme (IGCP) and the programmes relating to the marine sciences. IEEP's contribution has taken particular shape concerning the studies and the organization of seminars, research and experimental projects, as a result of which UNESCO has clearly stated that environmental education should become an integral part of education taking into account both the social and the natural aspects of the human environment.

**Let us now go through the various programmes:**

- **International Geological Correlation Programme (IGCP):** This programme has been implemented by UNESCO in collaboration with the International Union of Geological Sciences. Its objective is to encourage coordinated research on geological problems of global importance by setting up spatio-temporal connections and making the history of the planet well known along with the origin and formation of mineral and energy resources.





- **International Hydrological Programme (IHP):** The objective of the International Hydrological Programme (IHP) is to make a comprehensive assessment of the freshwater resources of the different regions of the world. It also intends to develop a scientific and technological foundation for the rational management of those resources from both the quantitative and qualitative perspectives.
- **International Oceanographic Commission (IOC):** The programmes of IOC and UNESCO's supplementary programme on the marine sciences are intended to improve the understanding of the ocean which would enable its resources to be used without damage to the ecosystem. In the field of marine sciences, the COMAR project comprises the implementation of research and training activities with the aim of combined management of coastal systems.

UNEP through its various international and regional programmes has successfully provided training to more than 10,000 professionals and specialists from the developing countries. Another such programme is the Programme on Desertification Control, which endeavours to coordinate the activities undertaken at the regional and national level to fight desertification.

Apart from the various environmental educational programmes launched by UNESCO-UNEP, one needs to pay attention to the fact that several training courses have also been offered by UNEP in the field of environment management services. In this context, environment training courses are provided concerning soil, water, energy, wildlife, industry and environment and desertification control among others.

Hence, one can summarize that the various scientific programmes developed by UNESCO-UNEP, have undoubtedly made a significant contribution both at the national and international level for the development of environmental awareness, education and training for sustainable development.

### The United Nations Conference on Environment (Stockholm, June 1972)

The UN Conference was a major event for those concerned with the quality of the environment of the world. This conference resulted in the creation of the United Nations Environment Programme (UNEP). It also focused attention on an international environmental education programme (IEEP).

The UNEP is conceived as a catalyzing agency for the United Nations family to help focus on international issues, monitor trends and facilitate coordinated international action to safeguard the environment.

In the 1980s Member States negotiated to reach an agreement on several aspects of environmental concern. The leading scientists met at the World Climate Conference in 1990 to find ways to redress the harmful effects of environmental degradation and climatic change. It was followed by the United Nations Conference on Environment and Development held at Rio de Janeiro in 1992, which became known as the Earth Summit. The summit adopted a declaration which defines the rights and responsibilities of States and provides guidelines for the management of forests worldwide. Among other things, it was declared that the states have a right to exploit their own resources but not to cause damage to the environment of other states. In a conference in Berlin in 1995, it was realized that industrialized countries did not carry out the general commitments to limit emissions of toxic gases. It was decided that the northern

industrialized countries should reduce the emissions of poisonous gases by about 50 per cent.

Selected Programmes Included in Earth Summit Agenda 21 at the United Nations Conference on Environment and Development (UNCED) Conference Held at Rio de Janeiro (1992):

- Promoting and protecting human health conditions
- Integrating environment and development in decision making
- Protecting the atmosphere
- Combating deforestation
- Managing fragile eco-systems: combating desertification and drought
- Promoting sustainable mountain development
- Promoting sustainable agriculture and rural development
- Conserving biological diversity
- Ensuring environmentally sound management of biotechnology
- Protection of the oceans, all kinds of seas, including enclosed and semi enclosed seas and coastal areas, and the protection, rational use and development of their living resources
- Protecting the quality and supply of fresh water resources: application of integrated approaches to the development, management and use of water resources
- Promoting environmentally sound management of toxic chemicals, including prevention of illegal international traffic in toxic and dangerous products

### Check Your Progress

1. Name some of the programmes launched by UNESCO in the field of spreading environmental education.
2. Name the conference which led to the formation of UNEP.

## 8.3 ROLE OF UGC/UNIVERSITIES, NCERT AND NGOs FOR ENVIRONMENTAL EDUCATION

### ROLE of UGC

Several government and non-government bodies are playing an integral role in promoting environmental education.

- The Ministry of Environment and Forests interacts actively with the University Grants Commission (UGC), National Council of Educational Research and Training (NCERT) and the Ministry of Human Resource Development (MHRD) for introducing and expanding environmental concepts, themes, issues etc. in the curricula of schools and colleges. The two Centres of Excellence, on Environmental Education of the Ministry are also involved in the activities of the UGC, NCERT and MHRD related to formal environmental education.
- The University Grants Commission (UGC) made it mandatory for all undergraduate colleges and universities in the country to introduce a six-month compulsory course in environmental studies beginning from the academic session 2004-05.
- Supreme Court Directive on the Compulsory Teaching of Environment

On a public litigation petition in 1991, the Supreme Court of India asked the National Council of Educational Research and Training (NCERT) and other concerned authorities to take steps to enforce compulsory education on environment in a graded way from the academic session 1992–93. Since the order was not implemented even after eleven years, advocate M.C. Mehta filed an application to ensure implementation of the earlier order. The Supreme Court passed the order on 22 April 2004 for compliance.

The Supreme Court issued a notice on 13 July 2004 to the concerned authorities to inform them whether they had implemented orders for inclusion of environment as a subject in the institutions under their court.

### Role of NCERT

It may be recalled that on 22 April 2004 the court had endorsed a model syllabus prepared by the NCERT for introducing environmental studies as a compulsory subject from class one to class twelve.

The NCERT is the model agency to monitor the implementation of the model syllabus in schools. The syllabus has been prepared after consultation with several experts and institutions, State governments, the Central Pollution Control Board and non-government organizations.

### Pattern of Environmental Education

- Environmental education should be integrated into the whole system of formal education at all levels
- Environmental education should be interdisciplinary in nature
- Environmental education should adopt a holistic perspective which will examine the ecological, social, cultural and other aspects of particular problems
- Environmental education should be centred on practical problems related to real life
- Environmental education should aim at building up a sense of value

The National Policy on Education 1986 emphasizes environment as one of the ten core areas of education and it has been a part of the school curriculum for several years. On the public interest litigation by Mr. M.C. Mehta, the Supreme Court has drawn the attention of the masses towards EE and it has also helped to structure the implementation of EE in formal education. There is now an agreed upon approach, syllabus and materials for EE that have been published by the NCERT. (See box 3 'Supreme Court Order on EE' for details)

The key document encapsulating the approach for implementation of EE in the school curriculum is the Affidavit which was submitted to the Supreme Court in 2007 and which was accepted by the Supreme Court in Dec 2010. The main declarations were as follows:

- Infusion of EE concepts in all subjects
- Compulsory evaluation of EE content with at least 10% of the total marks devoted to EE content

- No written exam in XII standard
- Major emphasis on project-based learning

Following the acceptance of the Affidavit, the NCERT published in 2011 the '*Handbook on Environmental Education*' which provides source material for the core course at the XI and XII standard levels. Project books have been developed for Standards VI to X. Each student is expected to carry out at least two projects every year, and the whole class can carry out at least 20 different projects.

Following the NCF 2005, at NCERT when the textbooks were being developed, a workshop was held to orient textbook writers to the approach to EE and the syllabus. After detailed discussions, a report was prepared on how the infusion can take place.

NCERT has not only adopted the approach itself but has also made it mandatory for the state boards that they should provide orientation to textbook writers about EE and then, after the textbooks are developed, prepare the report on infusion.

Each state has been requested to:

- Identify nodal officers at the state and district level such as in DIETs
- Nodal officers were in turn made responsible to select experts and experienced professionals from universities and NGOs who can further provide training and expertise in the new approach to EE.

The structured approach initially was aiming at development of awareness about environmental issues as desired by the directive of the Supreme Courts. But looking at the true spirit of the PIL 860/1991 and the directives of Hon'ble Supreme Court of India – the main objective of EE as per NCF-2005 is to bring about attitudinal changes amongst children. With the implementation of this infusion approach in the EE curriculum, attitudinal changes have been witnessed and environmental awareness has increased.

The 'Eco-Club Programmes', that are the MoEF sponsored NGC programmes in which the students are involved in projects related to the current environmental issues. NGC programmes are further analysed by Centres of Excellence of MoEF, the Pollution Control Board etc. MHRD through the formal educational system also encourages the actions of MoEF. The tasks of MoEF and MHRD are bridged by awarding NGC programmes to those schools which encourage their students to take up relevant environmental projects.

**Box 1: New Approach to Implementation of EE as per NCF-2005**

The NCERT has recommended the following implementation approach in the context of EE (which are described in the Affidavit to the Supreme Court, and accepted).

- Classes I and II: EE concerns are transacted through activities.
- Classes III to V: EE is being imparted through a subject namely EVS (Environmental Studies)
- Classes VI to X: Follows infusion approach for EE. 10 percent of assessment of grand total is based on EE besides project and field work in separate time carved out from existing timetable.
- Classes XI and XII: Besides infusion in electives. A separate compulsory course 50 marks based on core syllabus and projects work is for all. Marks to be reflected/ added to the total marks. Time to be carved out of existing time table (such as time allocated to general studies) table.



**Box 2: Issues to Consider for Strengthening EE**

The whole exercise of the PIL, the NCERT Afûdavit and the Supreme Court Ruling has probably served to enhance the scale of discussions on environment education in the country. A syllabus, project books, textbooks, training courses etc have been prepared by NCERT and Education Depts. and others in various states over the last few years. However, with the ûnal Ruling, some issues such as the following must be considered, and discussions should continue on how to integrate sustainability thinking into education:

- In Std VI to X, Project Assessment of EE projects would be 10 per cent of the marks allocated for practical / projects in Science and Geography. This means that if 20 marks are allotted, then each student would have to undertake two EE projects that would be assessed for just 2 marks.
- In several states, unlike in CBSE schools, there is no subject like General Studies at XI and XII level which is common to all streams. A separate compulsory subject may be needed at this level to transact the core component.
- In XI and XII, the method of seminars may not be practical in large class sizes.
- The capacity of teachers to organize projects based learning needs strengthening.
- Around the world (and in India), there are advances in thinking about Education for Sustainable Development, and ideas such as the whole school approach which can build upon the impetus provided by the Supreme Court Ruling.

**Box 3: The Supreme Court and Environment Education Sequence of Events**

**Writ Petition, 1991**

In 1991, Shri M C Mehta filed an application in the public interest (Writ Petition (Civil) No. 860 of 1991), asking the Supreme Court to:

- Issue direction to cinema halls that they show slides with information on the environment
- Issue direction for the spread of information relating to the environment on All India Radio and
- Issue direction that the study of the environment becomes a compulsory subject in schools and colleges

## Directive to NCERT to Prepare EE Syllabus, 2003

On 18th December 2003, the Hon'ble Supreme Court further ordered, "*We also direct the NCERT....to prepare a module (model) syllabus*", and directed that

> *"We accept on principle that through the medium of education awareness of the environment and its problems related to pollution should be taught as a compulsory subject. The University Grants Commission will take appropriate steps immediately to give effect to what we have said, i.e. requiring the Universities to prescribe a course on environment. So far as education upto the college level is concerned, we would require every State Government and every Education Board connected with education upto the matriculation stage or even intermediate college to immediately take steps to enforce compulsory education on environment in a graded way."*

NCERT developed a graded syllabus for Environment Education for 1 to 12 standards, which was accepted by the Supreme Court *(the syllabus has subsequently been revised for Standards XI and XII) to incorporate contemporary environmental issues.*

## Appointment of NCERT as Nodal Agency for EE, 2004

On 13th July 2004 the Supreme Court directed that *'the syllabus prepared by the NCERT for Class I to XII shall be adopted by every state in their respective schools'. It further directed that 'NCERT be appointed as a nodal agency to supervise the implementation of this Court's order'.* Compliance to Supreme Court order is mandatory and desirable, and applies to all states and Union Territories (in fact, it is one of the few things that apply to education uniformly all over India).

## EE and the National Curriculum Framework, 2005

In 2004, MHRD set up a nationwide process towards the development of the National Curriculum Framework 2005. This included the setting-up of a national steering committee and 21 national focus groups. One of these was a Focus Group on Habitat and Learning. In substance and spirit, this group was to look into the area of EE. The group delineated the objective as, 'The main focus of EE should be to expose students to the real-life world, natural and social, in which they live; to enable them to analyze, evaluate, and draw inferences about problems and concerns related to the environment; to add, where possible, to our understanding of environmental issues; and to promote positive environmental actions in order to facilitate the move towards sustainable development.'

The Group recommended a systematic infusion of components of EE into the curricula of all disciplines while ensuring that adequate time is earmarked for pertinent activities.

The NCERT prepared its new syllabi and textbooks in accordance with the NCF 2005.

## NCERT Affidavit, 2007

The NCERT submitted an Affidavit in October 2007 to the Supreme Court describing the spirit of the NCF 2005 and clarifying that to have compliance with the earlier order of the Supreme Court, a separate subject for EE is not a necessity. It can be done through infusion, in science, social studies, mathematics, language and other subjects, and/or through a separate subject. It does however have to be part of the compulsory curriculum.

This Affidavit is a key document outlining the sequence of relevant events subsequent to the PIL up to the proposal for how EE may be transacted from Standards I and XII. It was drafted after detailed discussions between the petitioner (Shri MC Mehta), the respondent (NCERT), and the experts appointed by the petitioner and NCERT.

## Acceptance of Affidavit, Dec 2010

The Affidavit was accepted by the Supreme Court on 03 December 2010 and the writ petition WPC 860/1991 has been disposed off. Now, all school education boards are expected to follow the approach to EE described in the Affi davit. NCERT is coordinating the effort to enhance implementation EE in the spirit of the NCF 2005 as it is the basis of the affidavit.

## Environmental Education in the School Curriculum

- At the primary stage, Environmental Studies (Social Studies, Nature Study and Health Education) is one of the prescribed areas of curriculum. It gets about 20 per cent time.
- At the middle level, environmental studies or environmental education is not prescribed as a subject. Science as an integrated course is heavily based on the use of day-to-day observation in the environment by the students and includes topics like the balance of nature, population, etc.
- At the secondary level, the subject of science includes many topics concerning environmental education.

Centre for Environment Education (CEE) was established in 1984 as a Centre of Excellence supported by the Ministry of Environment and Forests, Government of India. CEE is a national institute which has been established with the objective of promoting environmental awareness all over the country. CEE has been working in the various states of India in collaboration with the Department of Education, State Council of Education Research and Training (SCERT), State Institute of Education (SIE) and Directorate of Environment (DoE).

Let us take the example of CEE's working in Uttar Pradesh. Some of the important projects going on in the state are:

- Implementing Children Forest Programme in 100 schools of Lucknow with the support from UP Forest Department.
- Developed the Hindi version of UNESCO's Environment Education Kit on Desertification, which includes teachers' guide, case study series, cartoon book and poster.
- Implementing Ministry of Environment and Forests (MoEF) supported 'Ganges river dolphin – Conservation Education Programme' along Ganges and Brahmaputra rivers and its tributaries.

## Role of NGOs

### 1. Centrally Sponsored Scheme of Environmental Education

A Centrally Sponsored Scheme of Environmental Orientation to School Education has been started with effect from 1989–90, under which 100 per cent financial assistance is provided to States/Union Territories and voluntary organizations working in the field of environment education. Various programmes aimed at creating environmental consciousness among the students and the community would be organized on project basis in selected areas comprising homogenous ecological conditions. The project activities include review of curriculum, preparation of revised textbooks, curricular and extra- curricular materials, preparation of general informative books/brochures/ posters/audio-visual materials, adoption of monuments by schools for study and upkeep, study of ecological problems in the neighborhood, participation in conservation projects, etc. Setting up of school nurseries will be taken as one of the preferred activities with the help of State Departments of Environment and Forests and National Wastelands Development Board. The scheme also provides for involvement of voluntary organizations in innovative projects relating to environment education.

The scheme has received a very good response from the voluntary organizations. Some of the proposals sanctioned are:

- Uttarakhand Seva Nidhi, Almora, for environmental orientation to elementary education in Kumaon and Garhwal regions of Uttar Pradesh.
- Sanchal Foundation, New Delhi, for a project on social imperatives of development which seeks to establish a linkage between the natural disasters and environmental degradation.

- Centre of Environment Education (CEE), Ahmedabad, to act as a nodal agency for involving NGOs (non-government organizations) working in the area of environment education to take up locale-specific activities in a cluster of schools around which programmes would be designed and implemented with the national and State-level perspectives. The full intent of environmental education will not be achieved because the environmental concerns are locale specific and, therefore, do not admit global solution. These efforts, therefore, need to be supplemented by more intensive locale specific efforts.

The NGO's establish a worldwide network in collaboration with several governmental and non-governmental organizations in designing international environmental policies:

- Creating awareness among the general people on the existing environmental issues and problems
- Facilitating the participation of various kinds of stakeholders in the discussion on environmental issues
- Protecting the natural resources and delegating the equitable use of resources
- Generating data on natural resources
- Assessing and monitoring environmental quality
- Disseminating information through newsletters, brochures, articles, audio visuals and other sources of mass media
- Organizing seminars, lectures and group discussion for the promotion of environmental awareness

India has a number of NGO's working in the field of research and development, conservation and protection of the environment such as Assam Science Society, Centre for Environmental Education, Bombay Natural History Society, etc.

Greenpeace International is a non-governmental organization for the protection and conservation of environment. Greenpeace International uses direct action, lobbying and research to achieve its goals. Greenpeace International has 2.8 million supporters worldwide. It has national as well as regional offices in forty-one countries.

The mission of this independent, global non-governmental organization is to change attitudes and behaviour, to protect and conserve the environment and to promote peace by:

- Catalyzing an energy revolution to address the most important threat faced by earth, i.e., climate change.
- Defending the oceans of the earth by challenging wasteful and destructive fishing, and creating a global network of marine reserves.
- Protecting the world's remaining ancient forests on which many animals, plants and people are dependent.
- Working for disarmament and peace by reducing dependence on finite resources and calling for the elimination of all nuclear weapons.
- Creating a toxic free future with safer alternatives to hazardous chemicals in products and their manufacturing.
- Campaigning for sustainable agriculture by encouraging socially and ecologically responsible farming practices.





The organization currently actively addresses many environmental issues by running campaigns, with their primary focus on efforts to stop global warming and to preserve the biodiversity of the world's oceans and ancient forests. In addition to the more conventional methods of environmental organizations, such as lobbying with the politicians and attending international conferences, Greenpeace International has a stated methodology of engaging in non-violent direct action. Greenpeace International uses direct action to attract attention to particular environmental causes, whether by placing themselves between the whaler's harpoon and their prey, or by invading nuclear facilities dressed as barrels of radioactive waste. Some of Greenpeace International's most notable successes include the ending of atmospheric testing of nuclear weapons, a (purportedly) permanent moratorium on international commercial whaling, and the declaration of the Antarctica as a global park by the Antarctic Treaty, forbidding possession by individual nations or commercial interests. To back up this latter point, World Park Base was established in the Antarctica, and ran for five years, from 1987 to 1992.

## 2. Friends of the Earth

'Friends of the Earth' is the world's largest grassroots environmental network. It unites seventy-one different national member groups and some 5,000 local activist groups on every continent.

With approximately 1.5 million members and supporters around the world, Friends of the Earth campaigns on the most important and urgent environmental and social issues of the present times. It challenges the current model of economic and corporate globalization, while promoting solutions that will help in creating environmentally sustainable and socially just societies. Friends of the Earth follow a decentralized and democratic structure that allows all member groups to participate in the decision-making process.

### Mission

Friends of the Earth aims to:

- Protect the earth against further deterioration and repairing damage inflicted upon the environment by human activities and negligence
- Preserve the ecological, cultural and ethnic diversity of the earth
- Increase public participation and democratic decision-making, both of which are important for protecting the environment and sound management of the natural resources
- Achieve social, economic and political justice and equal access to resources and opportunities for men and women at the local, national, regional and international levels
- Promote environmentally sustainable development at the local, national, regional and global levels

### Activities of Friends of the Earth

Friends of the Earth works on various environmental and social issues. Through its programme on Climate Justice and Energy, it is fighting for justice for the communities affected by climate change and promoting energy sovereignty, the right of the communities in choosing their own sources of sustainable energy. It also advocates a

strong agreement within the framework of the UN negotiations, a just agreement on climate finance and an end to deforestation, one of the biggest causes of climate change.

The organization's Food Sovereignty Programme aims to stop the production of genetically modified organisms and corporate control over food. It fights for the right of the people to determine their own food systems.

The Forest and Biodiversity Programme of the Friends of the Earth campaigns against illegal logging and deforestation. It works with various communities and the local people to uphold their rights to manage their forests. It also exposes and opposes the negative impacts of monoculture plantations of crops, such as sugarcane, palm oil and soy for producing agro fuels.

Their Economic Justice – Resisting Neo-liberalism programme challenges the current economic model. It exposes and resists corporate power and the new Global Europe strategy and identifies and promotes initiatives that generate sustainable livelihood.

### (a) Climate justice and energy

The world today faces two related challenges that threaten the lives and livelihood of billions of people: climate change and global energy crisis. The main reason of these challcnges is our unsustainable level of consumption, which requires huge quantities of energy for production and transportation.

Solutions to these challenges lie in the right of different communities to choose their sources of sustainable energy and to develop a healthy consumption level. There is also a need for reducing greenhouse gas emissions and for all people to equally share resources within ecological limits. Friends of the Earth works for climate justice and energy access through proactive, community-based campaigns and projects.

### (b) Food sovereignty

Traditional food production systems like small-scale farming which aims to produce foodgrain for the local people, is now getting replaced by large-scale agriculture by transnational agribusiness. The climate crisis puts an additional threat on food production.

It is essential to build global food systems based on diverse, localized agricultural solutions. People should be allowed to determine and control their own food systems. This form of agriculture also helps communities to become more resilient to climate change. Friends of the Earth support small-scale peasant farmers in resisting the corporate powers. The organization helps in building bridges between those who produce and those who consume food.

### (c) Forests and biodiversity

The forests of the world are in trouble. Privatization, increased exports and liberalization of international trade have led to a massive increase in large-scale plantations, which produce and export timber and pulp. This has also led to the increase in demand for exotic timber and crops, such as soy and palm.

All these pressures have led to the disappearance of half of the world's forests. These forests need to be protected as they provide livelihood to many local communities and indigenous people. Forests store carbon and regulate our climate and thus are crucial in our fight against climate change. They are also home to various species of animals and birds on earth. Friends of the Earth member groups work in association with the local communities to preserve forests and uphold their rights to manage forest resources and secure sustainable livelihood. It campaigns against industrial large-scale plantations, monoculture production and commercialization of forests and biodiversity.

### (d) Economic justice – Resisting neo-liberalism

Trade and investment, development funding and corporate lobbying are the drivers of the present economic model. This model is based on the belief that economic growth and liberalization will make the world a better place. While this has benefited large corporations, it excludes and even harms the most impoverished people while doing little to protect the environment.

Friends of the Earth challenge the influential big corporations and questions the neoliberal policies of trade that do not take into account the general people's problems. The organization campaigns to change the course of the economy in a dynamic, creative and constructive way. It shares the inspiration and the positive experiences with old and new, just and sustainable development thinking and practices.

#### Check Your Progress

3. When was the Centre for Environment Education (CEE) established in India?
4. Name some of the NGO's working in the field of research and development in India.

## 8.4 CONCEPT OF RESEARCH

**Research** comprises creative work undertaken on a systematic basis in order to increase the stock of knowledge, including knowledge of man, culture and society, and the use of this stock of knowledge to devise new applications. It is used to establish or confirm facts, reaffirm the results of previous work, solve new or existing problems, support theorems, or develop new theories. A research project may also be an expansion on past work in the field. To test the validity of instruments, procedures, or experiments, research may replicate elements of prior projects, or the project as a whole. The primary purposes of basic research (as opposed to applied research) are documentation, discovery, interpretation, or the research and development (R&D) of methods and systems for the advancement of human knowledge. Approaches to research depend on epistemologies, which vary considerably both within and between humanities and science and its branches. There are several forms of research: scientific, humanities, artistic, economic, social, business, marketing, practitioner research, etc.

A broad definition of research is given by Martyn Shuttle worth - "In the broadest sense of the word, the definition of research includes any gathering of data, information and facts for the advancement of knowledge.

Another definition of research is given by Creswell who states, — 'Research is a process of steps used to collect and analyse information to increase our understanding of a topic or issue'. It consists of three steps: Pose a question, collect data to answer the question, and present an answer to the question.

### 8.4.1 Steps in Conducting Research

Research is often conducted using the hourglass model structure of research. The hourglass model starts with a broad spectrum for research, focusing in on the required information through the method of the project (like the neck of the hourglass), then expands the research in the form of discussion and results. The major steps in conducting research are as follows:

- Identification of research problem
- Literature review
- Specifying the purpose of research
- Determine specific research questions
- Specification of a conceptual framework - usually a set of hypotheses
- Choice of a methodology (for data collection)
- Data collection
- Analysing and interpreting the data
- Reporting and evaluating research
- Communicating the research findings and, possibly, recommendations

Rudolph Rummel says, 'no researcher should accept any one or two tests as definitive. It is only when a range of tests are consistent over many kinds of data, researchers, and methods can one have confidence in the results.'

### 8.4.2 Research Methods

The goal of the research process is to produce new knowledge or deepen understanding of a topic or issue. This process takes three main forms:

- Exploratory research, which helps to identify and define a problem or question.
- Constructive research, which tests theories and proposes solutions to a problem or question.
- Empirical research, which tests the feasibility of a solution using empirical evidence.

There are two major types of research design: qualitative research and quantitative research. Researchers choose qualitative or quantitative methods according to the nature of the research topic they want to investigate and the research questions they aim to answer:

#### 1. Qualitative Research

In qualitative research, the researcher is the instrument or the tool for designing, collecting, and analysing research. Qualitative research, in contrast to quantitative research, generally does not translate aspects of the world into numbers to be analyzed mathematically. Instead, it analyzes the world through the lenses the researcher brings to bear on the data.

Qualitative research aims to get a better understanding through experience, truthful reporting, and quotations of actual conversations. It is restricted only to test hypothesis and single set of subject, who is qualitatively researched. Observation and interview are the common methods used for qualitative research.



#### 2. Quantitative Research

The Quantitative research is concerned with testing of hypotheses by experimental, co-relation and survey (or descriptive method). The data collection methods are purely on random sampling and structured data collection instruments. The data is statistically analysed to compare and make relationship between the variables.

In qualitative or quantitative research primary, data is collected by interviews or questionnaires. Secondary data already exists, such as census data, which can be re-used for the research. It is a good ethical research practice to use secondary data wherever possible.

#### 3. Mixed-method Research

It is a research that includes qualitative and quantitative elements, using both primary and secondary data.

#### 4. Pure Scientific Research

Pure scientific research often referred to as 'pure science', is about explaining the world around us and trying to understand how the universe operates.

#### 5. Applied Scientific Research

Applied scientific research comprises testing of theories generated by pure science, and applying them to real situations. The researches on environmental study solve a specific question or issue and find out the definite comprehensive answer.

### 8.4.3 Significance of Research in Environmental Education

The significance and importance of research in environmental education are as follows:

- Maximize the scope of EE with state-of-the-art thinking, developments, innovations and perspectives in the areas of Environment and Sustainable Development
- Focus on capacity-building activities in programs and projects
- Develop programmes that are adaptable to different geographic, cultural, social and economic contexts
- Partnering with a view to utilizing the complementary strengths of other organizations, so as to avoid duplication of effort, and to network effectively towards the synergistic convergence of ideas and goals
- Develop programmes and materials to build on the existing strategic opportunities and facilities for EE
- Encouraging and supporting other agencies in the field of EE and ESD to develop similar materials and programmes based on their specific needs and situations
- Build synergies between the Government, NGOs and CEE for comprehensive impact
- Identify the key entry points for different thrust areas, and key targets for initiating and consolidating gains, to achieve a multiplier effect
- Facilitate information networks at local, national and regional levels, through a number of tools such as dialogues, directories, and newsletters

- Conduct workshops/ seminars to facilitate dialogue between various stakeholders, including the government and the society, on the environmental implications of growth and development

## 8.5 EMERGING AREAS OF RESEARCH IN ENVIRONMENTAL EDUCATION

Environmental Education has emerged as a new dimension in the history of education. A study of the development of environmental education reveals that its explosive growth is due to its strong relationship with the basic human needs and emotions.

School and teacher training colleges play an important role in environmental education and the effectiveness of such education depends upon the method of teaching, objectives to be achieved and the content of the curriculum. Therefore, the following objectives are to be kept in mind while designing the curriculum for environmental education.

Some of the objectives of environmental education are:

- To introduce students to the natural and social world
- To help evaluate and resolve problems related to the environment
- To develop an understanding of environmental issues
- To initiate positive environmental actions towards sustainable development

A revamping of the education system is required to produce environmentally conscious citizens through research and teaching at various levels to make environmental education a lifelong process with awareness and attitude. Such a challenge has to be taken by the educational institutions, government and semi-government bodies at all levels.

The world has now witnessed the development of information and communication technologies in which education plays a vital role to create awareness and build the capacity of communities to visualize and participate in the process of sustainable development of the environment.

Areas of Research and development in environmental education are:

### 1. Environmental Services

Environmental services usually deal with protecting or enhancing nature in one way or the other. These services of our nature have added to the economy of our nation. Even after adding value to the Gross Domestic Product (GDP) of our country, this area is wholly neglected and unwisely used. Therefore, it is the demand of time to raise awareness among people to save our nature and more and more research must be conducted in this sphere to impart its lost value. Also, researches must lay emphasis on the effectiveness of these services and promote them.

### 2. Global Competitiveness

With the emergence of supersonic communication technologies, the world seems to have become small. Though globalization has benefitted the world but it has diminished the natural resources. The natural resources are being used in a non-judicious manner without showing any concern for the future generations. In such a situation, it is strongly recommended to conduct researches



- To balance the use of natural resources and industrial development
- To optimize the use of natural resources
- To attain sustainable development

### 3. Forestry and Extension of Forests

Despite being immensely benefited from the forest resources, their importance is largely undermined in our society. Forests are being cut to build houses and urban infrastructure. Trees are not only getting reduced in numbers but also there is a decline in the quality of plants and trees. There is an urgent need to conduct researches:

(i) To maintain quality and quantity of plantation in forests

(ii) To check illegal cutting of trees

(iii) To analyse, revive and review the fruitful outcomes of the policies, Acts such as National Forest Policy, 1998, Indian Forest Act, 1927, Forest Conservation Act, 1980, enacted to protect the forests

(a) The link between the researches conducts in the laboratories and the local bodies like farmers is very weak. The outcomes or findings of the experiments fail to reach the local level, i.e., the local farmers and producers. Therefore, researchers are required to develop a strategy by which farmers can get benefitted with new methods and techniques.

(b) The universities conducting UG and PG courses in forestry are run by the Indian Council of Agricultural Research (ICAR) and financed by the Indian Council of Forestry Research and Education (ICFRE). It is the responsibility of ICFRE to monitor, upgrade and improve the quality of the curriculum. However, there is a lack of coordination between these two councils. Hence, studies must be made to develop a link in between two councils to evaluate and monitor the forest courses continuously.

(c) Researches must be done on the concerns which are based on the local needs. This means one has

- To study the needs of the farmers, quality of soil, seeds and plants and condition of rains
- To study the problem faced by farmers
- To study the ways to improve the quality and quantity of yields
- To think over extension of forests by replacing laboratories to Krishi Vigyaan Kendra that can decide their programmes by collecting the feedbacks from farmers

(d) Studies are required on the emerging areas like biological record keeping, environmental impact indicators, biodiversity valuation principles, trade and intellectual property rights, biopiracy, gene pool management, protected areas effectiveness, environmental economics, carbon sequestration, bio economic modeling and valuation of ecosystem services.

### 4. Wildlife

India is a land of various species of animals, birds and water animals. Many of them have extinguished due to climatic changes, illegal poaching, smuggling and absence of natural habitat.

Extensive attention is required to conduct researches:

- To orient the philosophy of wildlife management in the local community.
- In order to involve the local communities as a part of participatory models in protecting the wildlife and understanding the responsibilities of human beings towards them
- To encourage eco-tourism
- To review and extend the role of government and semi-governmental bodies, local communities, NGO's to save the endangered species from getting extinguished
- To measure the efficiency and effectiveness of Wildlife Protection Act, 1972 and repealing it to insert stricter regulations against poaching and smuggling

## 5. Balance between Environment and Development

There exists a correlation between environment and development. In this century, it is required that development must be sustainable. By sustainable development we mean that development takes place in such a manner, that the natural resources are utilized in a judicious manner, so that the future generations are also able to satisfy their needs through the use of these resources.

The Ministry of Environment and Forests, is the central decision making agency responsible for taking decisions related to India's environmental and forestry policies and programmes. The Ministry of Environment and Forests have designed a national environmental information system for collecting, storing, retrieving and disseminating information in the field of environment and its associated areas.

Therefore, a comprehensive information system is required for institutions, organizations which are engaged with various subject areas of the environment. Researches must be conducted on studying the effectiveness of information system and finding out ways to make it more informative.

## 6. Conservation and Protection of Animals and Plants

The Wildlife Protection Act, 1972 is an Indian legislation enacted for the protection of plants and animal species. Research is required:

- To specify the plant and animal species and decide which species are to be kept for consideration (included) and which are to be excluded
- To collect hard data about the population and population dynamics of these species
- To develop standardized norms for inclusion and exclusion of plants and animal species
- To find out the reasons for those species which are excluded
- To study about the balance in the population of the species by the propagation methods

## 7. Biodiversity

Biodiversity is an ignored field and no attempts have been made to document biodiversity at the local, regional and national level. The areas on which researches must be carried out-





- Effect of construction like-roads, railways, dams, mining, industries and societies in the area of high population of species on biodiversity
- Planning a programme to study phytodiversity like angiosperms, gymnosperms, bryophytes and fungi

## 8. Integration and Harmonization of Different Courses

Various courses at the graduation and post graduation level are run by different universities and institutes on environmental areas and are responsible for imparting knowledge regarding environmental issues. There exists a shortfall in this system because the knowledge so imparted does not add value to the students nor is it utilized in resolving any environmental issues. In such a situation, the young minds are getting underutilized and are unable to develop themselves and the nation's economy.

Central and state governments must act proactively and provide students with appropriate job opportunities so that they can unwind their versatile thoughts for the development of environment.

Researches must be done to

- Develop coordination between academic, professional and training courses
- To redesign the whole system of academic, professional and training courses
- A system must be developed in such a way that it attracts foreign students
- To universalize the various courses related to the environment
- To develop the need based specified courses and training programmes

## 9. Ecosystem

Ecosystem is the interrelationship between the biotic and non-biotic components of the environment. Various ecosystems exist under one ecosystem. It mainly consists of human beings, flora and fauna. Ecosystem is highly affected by the changes in the environment. Therefore, it is required to keep a vigilant eye on the ecosystem. Many animal species are getting extinct due to urbanization, habitat loss and pollution.

- More studies are required to find out the ways to protect the endangered species
- To record the data about the endangered species and extinguished species

## 10. Land Degradation

Degradation of land and reduction of fertile land are one of the most common results of imbalanced nature. This is caused due to excessive use of pesticides and chemicals, practices of yielding more than the capacity of generation, use of unscientific methods and use of fertile land for urbanization. It is required to focus on the causes of degradation so as to keep the environment safe. Researches must be conducted on the following areas:

- To adopt scientific, sustainable land use practices for optimum utilization of land and soil for quality production
- To innovate techniques to convert barren unproductive land into fertile lands
- To protect the desert ecosystem and develop techniques to maximize the utilization of the desert resources

## 11. Mountain Ecosystem

Mountain ecosystem, one of the most fragile ecosystems consists of flora and fauna found in the mountain areas. Due to deforestation, unplanned urbanization, pollution of fresh water sources, inadequate sanitation, overcrowding in hilly areas, landslides due to heavy rains and excessive focus on developing tourism mountain ecosystem is losing its identity. Research is required to be conducted:

- To visualize ways to protect the mountain ecosystem
- To measure and identify the role of local community and resources in maintaining production
- To analyse the best practices that could be carried out to resolve the environmental issues with the help of local community
- To train and impart vocational skills so that the local communities can grab appropriate opportunities for better living

## 12. Pollution Abatement

Pollution is mainly caused due to the introduction of contaminants into the natural environment that causes instability, disorder and harm to the ecosystem. To reduce the level of pollution, researches need to be carried out in the following areas:

- To design alternative energy resources and replacement of natural fossil fuels by the use of bio-gas, bio- diesel, solar energy and wind energy plants
- To study the use of such resources in which transmission of heat and carbon is minimum
- To invent low cost techniques and models for sewage treatment and solid waste disposal

## 13. Environmental Education and Research

Environmental education is a discipline which is infused with science and social elements. Science exposes the students to their real life situations and enables them to analyse and evaluate the problems related to the natural and social environment. No doubt, environmental education is fulfilling its goals by providing theoretical knowledge to students but natural and social exposure is lacking. Thus, educational studies must be carried out:

- To promote practical training such as activity based projects and field assignments
- To study the effectiveness of the above said methods as compared with the traditional methods
- To evaluate the result of pollution and climate changes on fresh water resources
- To study the impact of climate change on glaciers, flow of rivers, sea tides and rainfall
- To study the different river valley projects, hydro thermal projects and canal and dam building projects
- To refine and modify the environmental education curriculum and analyse the curriculum of various schools and universities
- To design co-curricular activities to promote field knowledge to students



## 14. Training and Capacity Building

Training and capacity building means the training of those people engaged in the environmental services and generating capacities within them physically and mentally to get well equipped to encounter hazards and disaster situations. Researches need to be carried out in this area to promote the following:

- To study the various means to circulate knowledge and spread awareness regarding the emerging issues of environment
- To provide opportunities to people engaged in environmental services to express their views and suggestions to improvise
- To revive the training of trainers and higher study courses

## 15. Information Management

This is an era of internet revolution. Internet has emerged as an incredible source of sharing information. Internet provides access to speedy communication covering the entire country but still there are some arid areas which are deprived of the Internet facility. Many departments of governmental and semi-governmental bodies are still using manual recording procedures for forest inventory, growth and yield statistics, diversity of species, migration of species and quantity of pollutants and their effect. It is more time consuming and involves huge labor cost. Therefore,

- Surveys must be done to identify the places which are not equipped with these facilities
- Distribution of computers and posting of trained officers to remote areas
- Provision of Geographic Information System for storage, analysis and retrieval of spatial, temporal and tabular data for natural resources
- To prepare a unified database that can be utilized both for policy formulation and planning purposes

## 16. Population Explosion

Population explosion is a consequence of the rapidly increasing population of our country. Today, the population of India has crossed 1.241 billion according to 2011 census. Population has exploded due to various reasons which are illiteracy, polygamy, decline in death rate and others. There is a huge scope of studies regarding:

- Awareness and implementation of family planning techniques
- Balanced birth rate and mortality rate and maintenance of their proper record
- Role of education in providing awareness by infusing concerns regarding population control in the curriculum

## 17. Development of Eco Friendly Products

Developing eco-friendly products and spreading their use is a vital step in the process of protecting the environment. Eco friendly products can be manufactured for cosmetics, food packaging, agricultural products and medicines, etc. Research can be conducted:

- To seek the areas and potential eco friendly products, eco friendly environment can be created
- To analyse the methods and ways to manufacture pollution free and environment friendly products

- To study the effectiveness of the use of organic medicines in place of allopathic medicines
- To study the development of small scale industries, the promotion of artisans and craftsman in remote and tribal areas to efficiently produce articles made from recycled material

## 18. Hazardous Management

Tremendous benefits have been derived from the use of pesticides in the areas of forestry, public health, domestic sphere and agriculture. Apart from its multiple uses, pesticides have adversely affected human beings, animals, cultivation of crops and the environment as a whole. The detrimental impact of pesticides on human beings has been studied at the international level. However, there is an urgent need to study the effects of these pesticides on human diseases such as cancer, kidney failure, and prolonged sterility in India.

- A study is also required to be conducted for the protection of farmers and workers who are exposed to the excessive use of DDT, Lindane and Dieldrin compounds that cause leukemia, brain tumour and gall bladder diseases.
- It is also required to conduct a survey to collect statistical data regarding the workers and farmers who are exposed to such harmful diseases.
- Study can be done on the pollution cycle of mercury and lead and its compounds which are affecting the aquatic and earthly life. Also, steps must be taken to find out the innovative methods of control to prevent mercury and lead toxicity in the environment.
- A perfectly monitored system must be developed to check the contamination of natural resources such as air, water and soil. Contamination could take place through germs, radiation, chemicals, insecticides, etc.

## 19. Waste Disposal Management

India is today facing the problem of disposing waste. There has to be a well planned mechanism for the proper disposal of waste.

- To study various disposal management techniques of foreign countries and draft a suitable disposable mechanism that is conducive to the Indian environment
- To study the methods of recycling the waste material

## 20. Resource Management

Due to increase in population and excessive use of resources, resource management is highly imbalanced. There is a need to achieve sustainable development and optimally utilize the meagre resources. The objectives of the National Environmental Policy 2006, are conservation of significant environment resources, efficient use of environment resources and enhancement of resources for environmental services, integration of environmental concerns in economic and social development. Research needs to be conducted for:

- The studies are required to analyse the status of achievement of these objectives
- To study the planning of conservation techniques
- To study the ways to promote the renewable energy resources
- To study the progress of objectives of the National Forest Policy, 1988



## 21. Quality Control

Quality of the environment is recognized by the quality of species vegetation, water, air, soil and other resources. The quality of these natural resources can be maintained only when they are prevented from any kind of contamination. Major part of the research must be focused on:

- To study the protection of grassland and wetland ecosystems
- To study the adaption of more integrative approaches to maintain quality
- To study the use of scientific efforts to deal with large scale changes which are affecting the land based system
- To identify the species which have an ecological value and assist in maintaining the productivity and sustainability of the forest communities
- To study the effect of chronic and acute disturbances that cause malfunctioning of habitats
- To study the methods that help in reinstating the species to their respective habitats after such disturbances
- To analyse the economical value of ecosystem services
- To study the protection of environment from the danger caused by the living modified organisms ( LMO's)
- To develop safe processes and procedures for the production of LMO's

## 22. Policies and Legislative Framework

This area of research lays emphasis on the policies and the laws that govern the protection of the environment. There are many laws implemented for the proper governance of environment but there exists an ambiguity regarding its objectives.

Laws that govern environmental issues are: National Forest Policy 1988, the Indian Forest Act 1927, The Forest (Conservation) Act 1980, Wildlife Protection Act 1972, Biodiversity Act 2002, National Environment Policy 2006, Environmental Protection Act 1986, Water Prevention and Control of Pollution Act 1974, Water Cess Act 1977 and Air Prevention and Control of Pollution Act 1981.

- To study the possible amendments in the Acts, so formed, with the advent of new technologies
- To measure the effectiveness of these Acts in order to protect our environment
- To make these laws people friendly so that the people can be aware about the provisions of these Acts

## 23. Curriculum Reformation

The curriculum for environmental education has been well designed by NCERT and the National Curriculum Framework. It is mainly based on interdisciplinary and multidisciplinary approaches. Still there is some scope for practical training which adds to classroom teaching. Research must be conducted:

- To promote the development of co-curricular activities and practical field work specially in rural areas to make the rural communities aware about health and hygiene
- To study the introduction of the role of media and role of technology in the curriculum

- To conduct surveys on the availability of textbooks and the material on multimedia which are based according to the curriculum
- To focus on the evaluation of the curriculum which should be refined and modified according to the present situation of the country

### 24. Finance, Budget and Expenditures

When we talk about the development of environment and ways of protecting it, the major issue that arises is the availability of adequate finance, preplanned budget and spending them at the proper place where it is required. Therefore, a detailed study is required to analyse, review and implement the governmental budget policies and to forecast the future allocation of monetary resources in the field of development and protection of the environment.

- To encourage students, researchers and officers by giving them scholarships, stipends and other amenities by the colleges, universities and governmental agencies for their extensive work in the field of development and protection of the environment
- To encourage students and researchers for training at the international level sponsored by governmental agencies
- To avail funds to develop highly equipped centres with well trained personnel for providing training in rural areas, in the areas of disaster management, agriculture, population control, vaccination and pollution control
- To avail adequate funds for the development of alternative energy resources like solar energy units, installation of wind mills to generate wind energy, hydel energy projects, construction of dams, and irrigation facilities

### 25. International Research

There are institutions present in different sectors which are working in areas like interaction between geosphere and biosphere, microbiology of soil, eco-friendly technologies, floods, cyclones, landslides and coastal resource management and fresh water resources. The information about all these areas must be exchanged among nations to bring about sustainable development.

#### Check Your Progress

5. List some of the emerging areas of research in environmental education.
6. What kind of research work needs to be conducted in the field of quality of the environment?

#### Did You Know

- A recycled tin can would save enough energy to power a television for 3 hours.
- The use of plastic growing about 4 per cent each year. Plastic can take up to 5 years to break down.



## 8.6 STRATEGIES IN ENVIORNMENTAL EDUCATION



### Strategies for Curriculum and its Transaction in Environmental Education

The objectives of environmental education can be fulfilled by formal and non-formal system of education.

The strategies of EE have been summarized as:

- Teaching can be made effective and interesting by real experiences
- Helps in developing ability of observation and imagination
- Objectives of teaching can be realized
- Develops feeling of cooperation and team work

The co-curricular activities of education are the most appropriate means for providing opportunities for the action. There are two main programmes recommended by educational commission and policy:

- Socially Useful Productive Work (SUPW)
- National Social Scheme (NSS)

The activities are:

- To clean environment through NSS camps
- To grow plaints & develop gardens for protection
- To clean the public places
- To construct roads, dig pits for the wastes
- To develop sense sanitation among the people by organizing cultural programmes
- To develop the consciousness about population education by organizing camps of population education or family planning
- To encourage the students to prepare charts related to environmental pollution and its protection
- To motivate the students for using stories and essays on the environmental education

### Roles of MoEF, MHRD and other Ministries

The responsibility of the formal educational system for environmental education is on the Ministry of Human Resource Development, and the parallel responsibility of EE through non-formal efforts are associated with the Ministry of Environment.

### EE in the Curriculum

The national system of education, as defined in the National Policy on Education, 1986, visualizes a national curricular framework which contains a common elements related with natural and social environment.

The National Policy on Education, 1986 (NPE) states that the 'protection of the environment' is a value which along with certain other values must form an integral part of the curriculum at all stages of education. The policy states: 'There is a paramount need to create a consciousness of the environment. It must permeate all ages and all sections of society, beginning with the child. Environmental consciousness should

inform teaching in schools and colleges. This aspect will be integrated in the entire educational process.'

There has been special emphasis on the need of the following:

- To give importance to environmental education, and this has been kept in view while designing curriculum
- To framing the syllabi and developing textbooks

The National Council of Educational Training and Research (NCERT), the apex body in the area of developing curriculum for the formal education system, developed a four pronged approach. The four elements of the strategy are:

1. Strengthening Infusion of EE
2. Teacher Training for effective EE
3. Introduction of Environment as a separate subject
4. Use of non-formal methods of EE through the involvement of NGOs

The success of the above strategy will depend upon the close synergy and partnership between the MHRD and the MoEF, their key institutions, State Governments, NGOs as well as educational institutions throughout the country. In addition, the four components are closely linked with each other and cannot be considered in isolation from the other.

CEE is closely involved in this process, part and supported by the World Bank. The priority is first step which is analysing the curricula across India to check the degree and quality of infusion of EE. The Bharati Vidyapeeth Institute of Environment Education and Research (BVIEER) is the helping hand of CEE is this process.

### Environmental Orientation to School Education (EOSE)

The Ministry of Human Resource Development (MHRD) supports a centrally sponsored scheme under its financial assistance is provided to government and voluntary organizations and other institutions working in the field of environmental education to develop local specific programmes and materials. Under this scheme, CEE is one of the designated nodal agencies.

### Centers of Excellence

One of the strategies of the Department was to establish 'Centres of Excellence' for research, training and education whose responsibility is to strengthen the country's infrastructure and develop an ability to solve the related issues. The Centre for Environment Education was set up in 1984 at Ahmedabad under this programme. A second centre, the C.P. Ramaswamy Environmental Education Centre at Chennai was set up in 1988 under the same scheme. The main activities of both the Centres are the development of environmental resource materials, organization of training programmes and creation of environmental awareness among teachers, students and the general community.

### Environmental Information System (ENVIS)

The Ministry of Environment and Forests has set up ENVIS for different aspects of environment. The objectives of this system are:

- To provide national environmental information service to the users of originators, processors and disseminators
- To build up storage, retrieval and dissemination capabilities
- To promote support and assist education and personnel training programmes designed to enhance environmental information processing and utilizing capabilities
- To promote exchange of information amongst developing countries. CEE has been designated as the National ENVIS Centre for Environmental Education

### Eco-clubs in Schools

- Under the ministry of environment and forests a non formal pro-active system is formed to impart environmental education to school children through environmental activities planned by eco-clubs.
- An Eco-club may be set up in a middle/high school and should consist of a minimum of 20 members and a maximum of 50 members, particularly interested in the conservation and protection of the environment, and willing to dedicate time and effort on a regular basis towards this end. The members may be drawn from students belonging to classes from VI to X. Each Eco-club will be in charge of an active teacher in the school concerned. The Ministry provides some finance support per annum per Eco-Club.

### The Agents of Change, Selecting Target Groups

CEE has strategically selected the primary school teachers as capacity builder agents to achieve maximum outcomes. Another target was 10-14 year olds to introduce activity based learning by doing approaches for environmental education as children are open, and capable of accepting new ideas and are free from pressure of competition.

### Training and Capacity Building

Another thrust area of CEE is training and capacity building of individuals and institutions in environmental education. A range of short and long-term training programmes are offered. Some of the programmes are: Training programme in Environmental Education (TEE), Internship Programme in Environmental Journalism, Training in Librarianship and Documentation (TLD), Training for Indian Forest Officers, Environmental Education Bank, Certificate Course in Environmental Education (CCEE) to fulfill the requirement of trained professionals in EE in South and South East Asia.

### Regional and International Approach

Various international activities are carried out by the Centre. The activities are on-going training programmes, workshops in collaboration with other NGOs, Institutes, Workshops/Seminars/Specific Focus Meetings, Training Programmes, Subject Expertise, Collaborative Projects and Partnerships and Networking.

SASEANEE is the Asian Regional Network of IUCN's Commission on Education and Communication. SASEANEE is a network of agencies and individuals in or interested in networking, initiating, or supporting environmental education programmes in the Region. The Secretariat is located at CEE. The South Asia Cooperative Environment Programme (SACEP) has through the Ministry of Environment and Forests, designated CEE as its Subject Matter Focal Point of Environmental Education and Training and National Focal Point.

## Strategies for Awareness and Evaluation of Environmental Issues

### 1. National Environmental Awareness Programme (NEAC)

The Ministry of Environment and Forests (MOEF), Government of India started National Environment Awareness Campaign (NEAC) in 1986 with the aim of creating environmental awareness at all levels of society. Under NEAC, the Ministry provides financial assistance to selected non-governmental organizations, education and training institutes, community organizations, etc. to create massive awareness among citizens of India.

### 2. Museums of Natural History

The Ministry of Environment and Forests adopted another strategy by setting natural History of Museums

- To promote non-formal education
- To create environmental awareness among people

### 3. Promoting Mass Media

The Ministry provides financial assistance for the production of films, video-spots and other audio visuals on important environmental issues for creation of mass awareness. These are normally telecasted by our National Television (Doordarshan) Channels. There are slots in our National TV Channel especially for environment.

### 4. The CEE Strategy

CEE is a national centre in the field of environmental education (EE). Its main objective is to promote environmental awareness, an understanding of natural processes and interrelationship between human beings and environment. It provides efforts to servicing the EE needs of special groups such as teachers and educators, journalists and communicators, business and industry, government departments and NGOs, planners and policy makers, in-service professionals and community-based organized guided by certain basic strategies for maximization of their effectiveness and impact.

### 5. Chain Management

CEE has its strategies to manage a chain between government and voluntary sector; using the mass media, seminars, workshops, etc. The 20,000 odd daily newspapers and periodicals in the country constitute a powerful medium for reach a significant section of the urban and rural population.

CEE publishes its articles in newspapers, non-governmental organizations and individual subscribers in English and Hindi and translated in many other languages. The multiplier effect is considerable. Exhibitions form another effective medium for environmental communication.

CEE develops environment-related themes which are telecast on television and video facilities.

### 6. Partnerships with NGO's

CEE has, therefore, developed a strategy of working with government and non-government institutions (local schools, local NGOs, State Departments of Education) across the country by developing school-cluster programmes supported by MoEF.



### 7. Quality Management

CEE strongly emphasis the quality of the materials, talent and validity of action carried under environmental education process. It appreciates imaginations, creativity in the actions and material.

### 8. Field demonstrations

CEE has through its field programmes aimed at creating awareness among the communities about the ecological significance of the forest areas around which they live. For e.g. CEE has launched the first Eco-development programme around the Ranthambhore National Park in Rajasthan. A field office was set up in 1987 at Sawai Madhopur near Ranthambhore for implementation of various educational and developmental programmes in selected villages around the park. The focus of the programme has been on environmental improvement by people themselves through environmentally sound technologies. Among the areas for which communication/ education programmes were developed to this end was animal husbandry. Another project – Hingolgadh Ecodevelopment Project was initiated in six villages around the Hingolgadh nature Education Park in Rajkot district of Gujarat. Today the project continues activities in 15 such villages and has extended its activities to 25 other villages not directly dependent on the sanctuary.

### 9. Experiencing Nature

Sundarvan, a nature education park, is part of CEE. It has designed some programmes to:

- Expose urban children and adults to the beauty and harmony of nature.
- Develop love and pity for flora and fauna.
- Educate children using small animals, nature camps and training camps.
- Organize special camps for special groups such as deaf and dumb children and under privileged children

Two permanent camp sites have been set up for nature education in the context of forest and marine environments respectively at Bakore and Beyt Dwarka in Gujarat. These are managed by Sundarvan. In total about 13000 participants have been exposed to nature programmes through these camps.

### 10. Sustainable Development

After the Rio Conference in the light of Agenda 21, comprehensive information system has been developed for key decision making areas such as industrial technology, conservation of protected areas and urban development. CEE launched in 1996 a special initiative that targets policy makers in every field.

Media for Sustainable Development (MSD) projects and programmes identify and articulate issues of current policy relevance in the environment-development.

A major book series funded by the Ford Foundation, the Swiss Development Cooperation and CEE on policy issues relating to sustainable development is being brought out by CEE. The books aim to:

- Educate and inform decision makers and policy planners about a concern or issue related to ecologically sensitive and equitable development

- Present alternative and innovative models of action for a variety of ecological situations
- Present audio-visual series dealing with sustainable development

MSD also runs a monthly press feeder service CEE-NFS (CEE's News and Feature Service) which supplies well researched, ready to use articles, news items and features on a non-exclusive basis to over 600 newspapers and magazines across the country. CEE-NFS seeks to make optimal use of existing media networks for the improvement of environmental awareness. CEE-NFS also carries articles based on issues identified by the books under the Environment and Development series.

### 11. IT/ Websites

Information Technology (IT) advances in the last few years has thrown up an entirely new medium, which is fast and economical. CEE decided to look at this as a potential medium of the future for EE.

CEE has already launched seven sites targeted at various groups. The sites and the groups they are targeted at are

## 8.7 RESEARCHES AND PROJECTS IN DIFFERENT FIELD OF ENVIRONMENT EDUCATION

A number of workshops have been conducted in collaboration with international agencies, institutions, and NGOS. Resource materials brought out by CEE have been adapted and developed for use in neighbouring countries. CEE has entered into various collaborative projects with international partners. These include partnerships with the following: national wildlife federation, USA, State University of New York, US National Park Service, World Resources Institute, USA, Field Studies Council, UK, International Television Trust for the Environment (TV/E), UK and UNESCO-UNEP.

1. CPCB, India has recently taken up a project on air quality with assistance of EEC.
2. Human exposure assessment location (HEAL) is part of the health related monitoring programme by WHO in cooperation with UNEP worked on the following:
   - Air monitoring
   - Water quality
   - Monitoring
   - Food columniation monitoring
3. ICSU international council of scientific unions a non-government organization encourages exchange of scientific information, international scientific co-operation & studies
4. International union for conservation of nature and natural resources (IUCN) scientifically based conservation methods
5. Projects earth- carried by Mr. Robert in collaboration with UNEP to empire, educate, on crucial issues facing the earth's environment
6. MAB launched by UNESCO (1971) carried 14 projects



**Recent Projects**



| | |
|---|---|
| **Project-1** | Ecological effects of increasing human activities on tropical and subtropical forest ecosystems |
| **Project-2** | Ecological effects of different land uses and management practices on temperate and Mediterranean forest landscapes |
| **Project-3** | Impact of human activities and land use practices on grazing lands |
| **Project-4** | Impact of human activities on the dynamics of arid and semi-arid zone ecosystems with particular attention to effects of irrigation |
| **Project-5** | Impact of human activities on mountain ecosystem. |
| **Project-6** | Conservation of natural areas and the gene material they contain. |
| **Project-7** | Ecological assessment of pest management and fertilizer use on terrestrial and aquatic ecosystem. |
| **Project-8** | Ecological aspects of urban systems with particular emphasis on energy utilization. |
| **Project-9** | Research on environmental pollution and its effects of the biosphere. |
| **Project-10** | Perception of environmental quality. |
| **Project-11** | Ecological effects of human activities on the value and resources of lakes, marshes, rivers, deltas, estuaries and coastal zones. |
| **Project-12** | Ecology and rational use of Island ecosystem. |
| **Project-13** | Effects of major engineering works on man and his environment. |
| **Project-14** | Interaction between environment transformation and the adaptive demographic and genetic structure of human population. |

### CHECK YOUR PROGRESS

7. What are the different strategies of environmental education?
8. State the reasons for developing nature related programme by CEE.

### ACTIVITY 1

Visit a nearby school or college and find out what the institution is doing to educate the students about environment and its problems.

## 8.8 SUMMARY

In this unit, you have learnt that:

- In 1975, in accordance with the recommendations of the United Nations Conference on the Human Environment (Stockholm, 1972) UNESCO and the United Nations Environmental Programme (UNEP) launched the International Environmental Education Programme (IEEP).

- Some of the programmes launched by UNESCO are Man and Biosphere Programme (MAB), the International Hydrological Programme (IHP), the International Geological Correlation Programme (IGCP) and the programmes relating to the marine sciences.
- UNEP through its various international and regional programmes has successfully provided training to more than 10,000 professionals and specialists from the developing countries. Here, mention should also be made about Oceans and Coastal Areas Programme Activity Centre (OCA/PAC), which expects to train some 500 experts yearly in 1988-1989.
- The Ministry of Environment and Forests interacts actively with the University Grants Commission (UGC), National Council of Educational Research and Training (NCERT) and the Ministry of Human Resource Development (MHRD) for introducing and expanding environmental concepts, themes, issues etc. in the curricula of schools and colleges.
- The University Grants Commission (UGC) made it mandatory for all undergraduate colleges and universities in the country to introduce a six-month compulsory course in environmental studies beginning from the academic session 2004-05.
- A Centrally Sponsored Scheme of Environmental Orientation to School Education has been started with effect from 1989–90, under which 100 per cent financial assistance is provided to States/Union Territories and voluntary organizations working in the field of environment education.
- Greenpeace International is a non-governmental organization for the protection and conservation of environment. Greenpeace International uses direct action, lobbying and research to achieve its goals.
- Friends of the Earth are the world's largest grassroots environmental network. It unites seventy-one different national member groups and some 5,000 local activist groups on every continent.
- A revamping of the education system is required to produce environmentally conscious citizens through research and teaching at the various levels to make environmental education a lifelong process with awareness and attitude.
- A broad definition of research is given by Martyn Shuttle worth - "In the broadest sense of the word, the definition of research includes any gathering of data, information and facts for the advancement of knowledge.
- CEE has strategically selected the primary school teachers as capacity builders agent to achieve maximum outcomes. Another targets were 10-14years to introduce activity based learning by doing approaches for environmental education as children's are open , capable for accepting new ideas and free from pressure of competition.

## 8.9 KEY TERMS

- **Centre for Environment Education (CEE):** CEE is a national institute established in 1984 with the objective of promoting environmental awareness all over the country.
- **Eco-friendly products:** Are those products which are not harmful to the atmosphere or surroundings.
- **Ecosystem:** Is the interrelationship between the biotic and non biotic components of the environment.
- **Geosphere:** It is the collective name for the lithosphere, the hydrosphere, the cryosphere, and the atmosphere.

## 8.10 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Some of the programmes launched by UNESCO are Man and Biosphere Programme (MAB), the International Hydrological Programme (IHP), the International Geological Correlation Programme (IGCP) and the programmes relating to the marine sciences.
2. The United Nations Conference on Environment Stockholm, June 1972 led to the formation of UNEP.
3. The Centre for Environment Education (CEE) was established in India in 1984.
4. Some of the NGO's working in the field of research and development, conservation and protection of the environment in India are Assam Science Society, Centre for Environmental Education and Bombay Natural History Society.
5. Some of the emerging areas of research in environmental education are:
   - Environmental Services
   - Global Competitiveness
   - Forestry
   - Wildlife
   - Balance between environment and development
   - Conservation and protection of animals and plants
   - Biodiversity
   - Integration and harmonization of different courses
   - Ecosystem
6. Quality of the environment is recognized by the quality of species vegetation, water, air, soil and other resources. The quality of these natural resources can be maintained only when they are prevented from any kind of contamination. Major part of the research must be focused on:
   - To study the protection of grassland and wetland ecosystems.
   - To study the adaption of more integrative approaches to maintain quality.
   - To study the use of scientific efforts to deal with large scale changes which are affecting the land based system.
   - To identify the species which have an ecological value and assist in maintaining the productivity and sustainability of the forest communities.
7. The strategies of EE have been summarized as:
   - Teaching can be made effective and interesting by real experiences
   - Helps in developing ability of observation and imagination
   - Objectives of teaching can be realized
   - Develops feeling of cooperation and team work




**M.A. (Education)**

**SECOND YEAR**

**MAEDN-5042**

INSTITUTE OF DISTANCE EDUCATION
Rajiv Gandhi University

www.ide.rgu.ac.in

# ROLE OF EDUCATION IN HUMAN RIGHTS AND WOMEN EMPOWERMENT

# ROLE OF EDUCATION IN HUMAN RIGHTS AND WOMEN EMPOWERMENT

**MA [Education]**

**Second Year**

**MAEDN-5042**

**RAJIV GANDHI UNIVERSITY**
Arunachal Pradesh, INDIA - 791 112

| BOARD OF STUDIES | |
|---|---|
| 1. **Prof. K C Kapoor**<br>Department of Education<br>Rajiv Gandhi University | Chairman |
| 2. **Prof. J C Soni**<br>Department of Education<br>Rajiv Gandhi University | Member |
| 3. **Dr. P K Acharya**<br>Department of Education<br>Rajiv Gndhi University | Member |
| 4. **Ms. Moyir Riba**<br>Institute of Distance Education<br>Rajiv Gandhi University | Member |
| 5. **Dr. Ashan Riddi**<br>Director, IDE | Member Secretary |



***Authors***

**Dr Gyanendra Nath Tiwari:** ***Units*** (1.6, 4.4, 5.2-5.7, 6.2, 6.3.3, 6.4, Units 7-8) © Dr Gyanendra Nath Tiwari, 2014

**Dr S.S. Jaswal:** ***Units*** (1.2, 1.3, 1.3.2, 1.5, 3.2-3.3, 3.5) © Dr S.S. Jaswal, 2014

**YSR Murthy:** ***Units*** (1.4, 2.3-2.4, 6.3-6.3.2) © Reserved, 2014

**Dr (Mrs) Amita Gupta:** ***Units*** (4.2-4.3) © Reserved, 2014

**Dr Kaushikee:** ***Units*** (4.5-4.8) © Dr Kaushikee, 2014

**Vikas® Publishing House:** ***Units*** (1.0-1.1, 1.3.1, 1.3.3, 1.3.4, 1.7-1.11, 2.0-2.2, 2.5-2.6, 2.7-2.11, 3.0-3.1, 3.4, 3.6-3.10, 4.0-4.1, 4.9-4.13, 5.0-5.1, 5.8-5.13, 6.0-6.1, 6.5-6.9) © Reserved, 2014



All rights reserved. No part of this publication which is material protected by this copyright notice may be reproduced or transmitted or utilized or stored in any form or by any means now known or hereinafter invented, electronic, digital or mechanical, including photocopying, scanning, recording or by any information storage or retrieval system, without prior written permission from the Publisher.

"Information contained in this book has been published by Vikas Publishing House Pvt. Ltd. and has been obtained by its Authors from sources believed to be reliable and are correct to the best of their knowledge. However, IDE—Rajiv Gandhi University, the publishers and its Authors shall be in no event be liable for any errors, omissions or damages arising out of use of this information and specifically disclaim any implied warranties or merchantability or fitness for any particular use"



Vikas® is the registered trademark of Vikas® Publishing House Pvt. Ltd.

VIKAS® PUBLISHING HOUSE PVT LTD
E-28, Sector-8, Noida - 201301 (UP)
Phone: 0120-4078900 • Fax: 0120-4078999
Regd. Office: 576, Masjid Road, Jangpura, New Delhi 110 014
• Website: www.vikaspublishing.com • Email: helpline@vikaspublishing.com


# About the University

Rajiv Gandhi University (formerly Arunachal University) is a premier institution for higher education in the state of Arunachal Pradesh and has completed twenty-five years of its existence. Late Smt. Indira Gandhi, the then Prime Minister of India, laid the foundation stone of the university on 4th February, 1984 at Rono Hills, where the present campus is located.

Ever since its inception, the university has been trying to achieve excellence and fulfill the objectives as envisaged in the University Act. The university received academic recognition under Section 2(f) from the University Grants Commission on 28th March, 1985 and started functioning from 1st April, 1985. It got financial recognition under section 12-B of the UGC on 25th March, 1994. Since then Rajiv Gandhi University, (then Arunachal University) has carved a niche for itself in the educational scenario of the country following its selection as a University with potential for excellence by a high-level expert committee of the University Grants Commission from among universities in India.

The University was converted into a Central University with effect from 9th April, 2007 as per notification of the Ministry of Human Resource Development, Government of India.

The University is located atop Rono Hills on a picturesque tableland of 302 acres overlooking the river Dikrong. It is 6.5 km from the National Highway 52-A and 25 km from Itanagar, the State capital. The campus is linked with the National Highway by the Dikrong bridge.

The teaching and research programmes of the University are designed with a view to play a positive role in the socio-economic and cultural development of the State. The University offers Undergraduate, Post-graduate, M.Phil and Ph.D. programmes. The Department of Education also offers the B.Ed. programme.

There are fifteen colleges affiliated to the University. The University has been extending educational facilities to students from the neighbouring states, particularly Assam. The strength of students in different departments of the University and in affiliated colleges has been steadily increasing.

The faculty members have been actively engaged in research activities with financial support from UGC and other funding agencies. Since inception, a number of proposals on research projects have been sanctioned by various funding agencies to the University. Various departments have organized numerous seminars, workshops and conferences. Many faculty members have participated in national and international conferences and seminars held within the country and abroad. Eminent scholars and distinguished personalities have visited the University and delivered lectures on various disciplines.

The academic year 2000-2001 was a year of consolidation for the University. The switch over from the annual to the semester system took off smoothly and the performance of the students registered a marked improvement. Various syllabi designed by Boards of Post-graduate Studies (BPGS) have been implemented. VSAT facility installed by the ERNET India, New Delhi under the UGC-Infonet program, provides Internet access.

In spite of infrastructural constraints, the University has been maintaining its academic excellence. The University has strictly adhered to the academic calendar, conducted the examinations and declared the results on time. The students from the University have found placements not only in State and Central Government Services, but also in various institutions, industries and organizations. Many students have emerged successful in the National Eligibility Test (NET).

Since inception, the University has made significant progress in teaching, research, innovations in curriculum development and developing infrastructure.

# About IDE

The formal system of higher education in our country is facing the problems of access, limitation of seats, lack of facilities and infrastructure. Academicians from various disciplines opine that it is learning which is more important and not the channel of education. The education through distance mode is an alternative mode of imparting instruction to overcome the problems of access, infrastructure and socio-economic barriers. This will meet the demand for qualitative higher education of millions of people who cannot get admission in the regular system and wish to pursue their education. It also helps interested employed and unemployed men and women to continue with their higher education. Distance education is a distinct approach to impart education to learners who remained away in the space and/or time from the teachers and teaching institutions on account of economic, social and other considerations. Our main aim is to provide higher education opportunities to those who are unable to join regular academic and vocational education programmes in the affiliated colleges of the University and make higher education reach to the doorsteps in rural and geographically remote areas of Arunachal Pradesh in particular and North-eastern part of India in general. In 2008, the Centre for Distance Education has been renamed as "Institute of Distance Education (IDE)."

Continuing the endeavor to expand the learning opportunities for distant learners, IDE has introduced Post Graduate Courses in 5 subjects (Education, English, Hindi, History and Political Science) from the Academic Session 2013-14.

The Institute of Distance Education is housed in the Physical Sciences Faculty Building (first floor) next to the University Library. The University campus is 6 kms from NERIST point on National Highway 52A. The University buses ply to NERIST point regularly.

**Outstanding Features of Institute of Distance Education:**

(i) At Par with Regular Mode

Eligibility requirements, curricular content, mode of examination and the award of degrees are on par with the colleges affiliated to the Rajiv Gandhi University and the Department(s) of the University.

(ii) Self-Instructional Study Material (SISM)

The students are provided SISM prepared by the Institute and approved by Distance Education Council (DEC), New Delhi. This will be provided at the time of admission at the IDE or its Study Centres. SISM is provided only in English except Hindi subject.

(iii) Contact and Counselling Programme (CCP)

The course curriculum of every programme involves counselling in the form of personal contact programme of duration of approximately 7-15 days. The CCP shall not be compulsory for BA. However for professional courses and MA the attendance in CCP will be mandatory.

(iv) Field Training and Project

For professional course(s) there shall be provision of field training and project writing in the concerned subject.

(v) Medium of Instruction and Examination

The medium of instruction and examination will be English for all the subjects except for those subjects where the learners will need to write in the respective languages.

(vi) Subject/Counselling Coordinators

For developing study material, the IDE appoints subject coordinators from within and outside the University. In order to run the PCCP effectively Counselling Coordinators are engaged from the Departments of the University, The Counselling-Coordinators do necessary coordination for involving resource persons in contact and counselling programme and assignment evaluation. The learners can also contact them for clarifying their difficulties in then respective subjects.

# SYLLABI-BOOK MAPPING TABLE

## Role of Education in Human Rights and Women Empowerment

| Syllabi | Mapping in Book |
|---|---|
| **UNIT I: Origin of the concept and historical development of human rights:**<br>- UN Charter, UDHR; Bases and sources of Human Rights-Values & Indian Culture<br>- Meaning and significance of human rights & Duties, education, Constitutional provision for education. | **Unit 1:** Origin and Historical Development of Human Rights **(Pages 3-36)** |
| **UNIT II: International covenants on Economic, Social and cultural rights:**<br>- Convention of rights of child and role of ILO; Gender Equity & Human Rights in Indian context. | **Unit 2:** International Covenants on Economic, Social and Cultural Rights **(Pages 37-59)** |
| **UNIT III: Human rights & Duties education in Indian context:**<br>- Human right protection act and role of NHRC, SHRC'S, UN, UNESCO, NCW and UNICEF<br>- Policy perspectives of human rights education, Human rights and duties and core elements in National curricular Framework, Meaning, objectives & methods of Human Rights Education. | **Unit 3:** Education in Human Rights and Duties: Indian Context **(Pages 61-95)** |
| **UNIT IV: Value Education and Peace Education:**<br>- Meaning, hierarchy, Types & Nature of value. Sources of value - Biological, psychological, sociological and spiritual.<br>- Needs and importance of value education;<br>- Approaches/Intervention Strategies for Values Education-'Rationale Building model, Value clarification model, Social Action model, Jurisprudential Inquiry model; Living Values - An Educational Programme (LVEP)<br>- Concept of Peace and violence.<br>- Nature, Importance and objectives of Peace education<br>- Approaches of Conflict Resolution and Education for Culture of Peace and Non-Violence. | **Unit 4:** Value Education and Peace Education **(Pages 97-160)** |
| **UNIT V: Historical and Post Independence Perspective:**<br>- Earlier influences of ancient scriptures on women education<br>- Socio-religious reforms and women education<br>- Colonial policies and women education<br>- Constitutional provisions<br>- Fundamental rights and directive principles of state<br>- Recommendation of various committees and commissions relating to girl education<br>- New Educational Policy and women education<br>- Status of women education, enrollment at different stages, literacy | **Unit 5:** Women's Education: Historical and Post-Independence Perspective **(Pages 161-195)** |

**UNIT VI: Education and Empowerment:**
- Emancipation of women and role of education, Minimum level of learning and scientific literacy and computer literacy, employment opportunities and problems or working women
- Role of NGOs, NHRC and NCW
- Government Efforts, statutes, Acts and other declarations for promoting women education Focus on teachers preparation in gender sensitivity

**Unit 6:** Education and Empowerment
**(Pages 197-213)**

---

**UNIT VII: Gender Studies:**
- Evolution of gender studies in India
- Impact of gender studies on women education
- Gender studies in North-east perspective
- Problems of Girls education in Arunachal Pradesh

**Unit 7:** Gender Studies in India
**(Pages 215-227)**

---

**UNIT VIII: Present Status:**
- Needed direction in educational-research access to education
- Retention, apathy at home, child labourer, early child marriage
- Discontinuance of out-dated laws, positive attitude towards girls education.
- Importance of SSA in Girls Education.

**Unit 8:** Present Status of Women's Education in India
**(Pages 229-241)**

---

# CONTENTS


**INTRODUCTION** **1-2**

**UNIT 1 ORIGIN AND HISTORICAL DEVELOPMENT OF HUMAN RIGHTS** **3-36**

1.0 Introduction
1.1 Unit Objectives
1.2 Concept of Human Rights
  1.2.1 Meaning and Significance of Human Rights and Duties
1.3 Bases and Sources of Human Rights
  1.3.1 Sources of Human Rights
  1.3.2 Theories of Evolution of Human Rights
  1.3.3 Promotion and Protection of Human Rights
  1.3.4 Human Rights Values and Indian Culture
1.4 UN Charter
1.5 Human Rights and Provisions of UDHR
1.6 Constitutional Provisions for Education
1.7 Summary
1.8 Key Terms
1.9 Answers to 'Check Your Progress'
1.10 Questions and Exercises
1.11 Further Reading

**UNIT 2 INTERNATIONAL COVENANTS ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS** **37-59**

2.0 Introduction
2.1 Unit Objectives
2.2 Global Concern for Economic, Social and Cultural Rights
2.3 Convention of Child Rights and Role of International Labour Organization (ILO)
2.4 Convention on Elimination of All Forms of Discrimination against Women
2.5 Gender Equity in Indian Context
2.6 Human Rights and Education
2.7 Summary
2.8 Key Terms
2.9 Answers to 'Check Your Progress'
2.10 Questions and Exercises
2.11 Further Reading

**UNIT 3 EDUCATION IN HUMAN RIGHTS AND DUTIES: INDIAN CONTEXT** **61-95**

3.0 Introduction
3.1 Unit Objectives
3.2 Human Rights Protection Act
  3.2.1 Protection of Human Rights Act, 1993
  3.2.2 Role of National Human Rights Commission (NHRC) and State Human Rights Commission (SHRC)
  3.2.3 Functions of the Commission
  3.2.4 Role of the United Nations (UN)
  3.2.5 Role of the United Nations Educational, Scientific and Cultural Organization (UNESCO)
  3.2.6 Role of National Commission for Women (NCW)
  3.2.7 Role of United Nations Children's Fund (UNICEF)

3.3 Policy Perspectives of Human Rights Education
3.4 Human Rights and Duties: Core Elements in National Curriculum Framework
3.5 Meaning, Objectives and Methods of Human Rights Education
3.6 Summary
3.7 Key Terms
3.8 Answers to 'Check Your Progress'
3.9 Questions and Exercises
3.10 Further Reading

**UNIT 4 VALUE EDUCATION AND PEACE EDUCATION** **97-160**

4.0 Introduction
4.1 Unit Objectives
4.2 Fundamental Concepts of Value
4.2.1 Meaning and Definitions
4.2.2 Classification and Hierarchy of Value
4.2.3 Sources of Value
4.2.4 Nature of Value
4.2.5 Types of Value
4.3 Needs and Importance of Value Education
4.3.1 National Policy on Education (1986 and 1992) on the Needs and Significance of Value Education
4.3.2 Readjustment of the Curriculum and School Programme for Value Education
4.4 Value Education: Intervention Strategies/Approaches
4.4.1 Rationale Building Model
4.4.2 Value Clarification Model
4.4.3 Social Action Model
4.4.4 Jurisprudential Inquiry Model
4.4.5 Living Values-An Educational Programme (LVEP)
4.5 Concept of Peace and Violence
4.5.1 Indian Perspective
4.5.2 Non-Indian Perspective
4.5.3 Theories of Peace
4.5.4 Approaches to Peace
4.5.5 Concept of Violence
4.6 Peace Education: Nature, Importance and Objectives
4.6.1 Objectives and Dimensions of Peace Education
4.6.2 Education for Peace in India
4.7 Approaches of Conflict Resolution and Education for Culture of Peace and Non-Violence
4.7.1 Education for Culture of Peace and Non-Violence
4.7.2 UNESCO's Culture of Peace Initiative
4.8 Municipal Law
4.8.1 Conflict Resolution in Indian Municipal Law
4.9 Summary
4.10 Key Terms
4.11 Answers to 'Check your Progress'
4.12 Questions and Exercises
4.13 Further Reading

**UNIT 5 WOMEN'S EDUCATION: HISTORICAL AND POST-INDEPENDENCE PERSPECTIVE** **161-195**

5.0 Introduction
5.1 Unit Objectives
5.2 Influences of Ancient Scriptures on Women's Education
5.3 Socio-Religious Reforms and Women's Education
5.4 Colonial Policies and Women's Education
5.5 Constitutional Provisions, Fundamental Rights and Directive Principles of State Policy
5.6 Recommendations of Various Committees on Girl Education
5.6.1 Committee on Women's Education (1957–59)
5.6.2 Committee for Girls' Education and Public Cooperation (1963–65)
5.6.3 Committee on the Status of Women (1971–74)
5.6.4 National Policy on Education (1986) on Women's Education
5.6.5 National Policy on Education Review Committee (1990)
5.6.6 Programme of Action (1992) and Women's Education
5.7 New Educational Policy and Women's Education
5.8 Status of Women's Education
5.9 Summary
5.10 Key Terms
5.11 Answers to 'Check Your Progress'
5.12 Questions and Exercises
5.13 Further Reading

**UNIT 6 EDUCATION AND EMPOWERMENT** **197-213**

6.0 Introduction
6.1 Unit Objectives
6.2 Emancipation of Woman and Role of Education
6.2.1 Minimum Level of Learning (MLL)
6.2.2 Scientific Literacy
6.2.3 Computer Literacy
6.2.4 Employment Opportunities and Problems of Working Women
6.3 Role of NGOs, NHRC and NCW in the Emancipation of Women
6.3.1 Role of NGOs
6.3.2 Role of NHRC
6.3.3 Role of NCW
6.4 Government Efforts in Promoting Women's Education
6.4.1 Statistics, Acts and Other Declarations
6.4.2 Teacher Preparation in Gender Sensitivity
6.5 Summary
6.6 Key Terms
6.7 Answers to 'Check Your Progress'
6.8 Questions and Exercises
6.9 Further Reading

**UNIT 7 GENDER STUDIES IN INDIA** **215-227**

7.0 Introduction
7.1 Unit Objectives
7.2 Evolution of Gender Studies in India
7.3 Impact of Gender Studies on Women's Education
7.4 Gender Studies in North-East India
7.5 Problems of Girl Education in Arunachal Pradesh

7.6 Summary
7.7 Key Terms
7.8 Answers to 'Check Your Progress'
7.9 Questions and Exercises
7.10 Further Reading

**UNIT 8 PRESENT STATUS OF WOMEN'S EDUCATION IN INDIA** **229-241**

8.0 Introduction
8.1 Unit Objectives
8.2 Direction of Research in Education
8.3 Retention, Apathy at Home, Child Labour and Early Marriage
8.4 Discontinuance of Outdated Laws and Positive Attitude Towards Girl's Education
8.5 Importance of SSA in Girl's Education
8.6 Summary
8.7 Key Terms
8.8 Answers to 'Check Your Progress'
8.9 Questions and Exercises
8.10 Further Reading



# INTRODUCTION

NOTES

The concept of human rights and its evolution has always been a topic of debate throughout the world. The notion of human rights is present in all major religious texts and precepts. It is a universal concept. Some of the events that punctuate the history of human rights include, notably, Magna Carta (1215), American Declaration of Independence (1776), French Declaration of Human Rights (1789), and the UN Charter (1945). The events that triggered the proclamation of the Universal Declaration were the massive human rights violations that took place in the Second World War, in the form of nuclear attack on Japan and German imprisonment and killing of Jews. These incidents convinced the world community that there were certain rights that all human beings around the world were entitled to, and which must be safeguarded.

In India too, the roots of the human rights movement can be traced to the freedom struggle and the nationalist leaders were the frontrunners of the same. While there are many classes of people in India even now, who live in tough and almost inhuman conditions, the condition of women, especially, has been poor historically. Women have had little freedom to express, work or even go out of their homes. And even worse, women have been victims of physical, emotional and verbal abuse from their husband, in-laws and sometimes even relatives in their own families. They have been deprived of education and even the right to choose to be a mother. The conditions have been particularly bad in rural areas. The government, through five-year plans and various other schemes and policies has been trying to improve women's conditions in all ways possible. You will learn about major issues related to women and how human rights agencies have been making efforts in that direction.

*Role of Education in Human Rights and Women Empowerment* has been designed keeping in mind the self-instruction mode format and follows a simple pattern, wherein each unit of the book begins with the *Introduction* followed by the *Unit Objectives* for the topic. The content is then presented in a simple and easy-to-understand manner, and is interspersed with *Check Your Progress* questions to reinforce the reader's understanding of the topic. A list of *Questions and Exercises* is also provided at the end of each unit. The *Summary*, *Key Terms* and *Further Reading* further act as useful tools for students and are meant for an effective recapitulation of the text.

This book is divided into 8 units:

**Unit 1** covers the origin of the concept and historical development of human rights and other main aspects like the UN Charter, bases and sources of human rights and value of human rights in the Indian culture.

**Unit 2** examines the international covenants on economic, social and cultural rights.

**Unit 3** is dedicated to education human rights and duties, in the Indian context. It also includes the role of important institutions like NHRC and SHRCs, UN, UNESCO, NCW and UNICEF.

**Unit 4** discusses in great detail value education and its meaning, and peace education and various aspects related to it.

**Unit 5** examines in detail the historical and post-independence perspectives on women's education, including the influence of ancient scriptures, impact of socio-

NOTES

religious reforms, colonization, constitutional provisions and recommendations of various committees and commissions

**Unit 6** explores the efforts made for emancipation and empowerment of women in India. It also touches upon concepts like scientific literacy and computer literacy.

**Unit 7** will familiarize you with the origin, status and impact of gender studies, with special emphasis on Arunachal Pradesh and other North-Eastern states.

**Unit 8** discusses the present status of women's education in India, and related issues like lack of educational research, child labour, child marriage, outdated laws and importance of Sarva Shiksha Abhiyan in girl's education.



# UNIT 1 ORIGIN AND HISTORICAL DEVELOPMENT OF HUMAN RIGHTS



**Structure**

1.0 Introduction
1.1 Unit Objectives
1.2 Concept of Human Rights
  1.2.1 Meaning and Significance of Human Rights and Duties
1.3 Bases and Sources of Human Rights
  1.3.1 Sources of Human Rights
  1.3.2 Theories of Evolution of Human Rights
  1.3.3 Promotion and Protection of Human Rights
  1.3.4 Human Rights Values and Indian Culture
1.4 UN Charter
1.5 Human Rights and Provisions of UDHR
1.6 Constitutional Provisions for Education
1.7 Summary
1.8 Key Terms
1.9 Answers to 'Check Your Progress'
1.10 Questions and Exercises
1.11 Further Reading

## 1.0 INTRODUCTION

In today's world, education is highly preferred aspect of human life or more accurately, human quality life. Here, the quality refers to how well an individual deals with his/her environment and makes the best out of it. It was born with human race and will continue till human race exist. Without it, human life is reasoning savage. Man becomes 'man' through education. In biological terms, man is an animal, its education which fashions and models him for society.

Louis Henkin, an eminent scholar, described human rights as the *idea of our time*, while author *Jack Donnelly* termed them, the *new standard of civilization*. Famous legal philosopher Ronald Dworkin regarded *rights as trumps* which limit state action whenever it encroached upon individual freedoms.

The notion of human rights can be witnessed in all major religious texts and precepts. The presence of the notion of human rights is perceptible and notable universally across different societies. The Universal Declaration of Human Rights (UDHR) is preceded by an eventful historical development that culminated in the proclamation of the Declaration. Some of the events that punctuate the history of human rights include, notably, Magna Carta (1215), American Declaration (1776), French Declaration of Human Rights (1789), and the UN Charter (1945). The immediate events that impelled the proclamation of the Universal Declaration were the massive human rights violations in the Second World War, which convinced the world community that there were certain rights that human beings around the world were entitled to, and which must be safeguarded.

In less than seven decades, the Universal Declaration of Human Rights (the UDHR) has come to be regarded as possibly the most important document created in the 20th century and as the accepted world standard for human rights. The UDHR draws life-preserving messages from the past, and is seen as an essential foundation for building a world in which all human beings can, in the centuries to come, look forward to living in dignity and peace.

With the end of the Second World War, the international political climate displayed potential for a great leap forward in recognition and observance of human rights. The representatives of the four major powers viz., the United States of America, the United Kingdom, Russia and China, met in 1944 at Dumbarton Oaks, a stately mansion in Georgetown, Washington DC, in the context of the two world wars that had been fought in less than thirty years, and cruelty almost beyond belief had been inflicted on members of the Jewish race in Europe as well as prisoners of war who were in detention in Asia and Europe. An atomic bomb was about to be set off that would show what enormous destructive power humankind could unleash in targeting nations as well as individuals, merely attributed to the fact that they were members of a particular race or religion.

The leaders felt there must be a better way for nations and people of the world to live together and settle their differences and establish plans for promoting peace and harmony to provide mankind with a better opportunity to live and develop. Today, the UDHR, with its various agencies, is regularly working to maintain peace and harmony in the world by securing good international relations among the countries of the world and making them liable towards peace and security. Consequently, this helped in preventing nuclear war, which is one of the main objectives for the creation of the United Nations.

In this unit, the nature and scope of human rights, their historical development as well as theories of human rights will be taken up for discussion. It also describes the evolution of International Human Rights Law under the aegis of the United Nations (UN) as well as institutional framework for the protection and promotion of human rights at the UN.

## 1.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Understand the drafting of the Universal Declaration of Human Rights
- Explain the Preamble to the Universal Declaration of Human Rights
- Discuss the role of UNDHR as a customary international law
- Describe the relationship between UNDHR and India
- Explain the significance of human rights
- Elaborate on the efforts for the promotion and protection of human rights
- Enlist different constitutional provisions for education

## 1.2 CONCEPT OF HUMAN RIGHTS

Human rights are comprehensive, and applicable to every individual. Respect for individual rights needs to be upheld at all times irrespective of circumstances and political system. Human rights consist of minimum entitlement that a government must provide and protect. They are fundamental in the sense that they cannot be denied under any circumstances. Men and women are equal in maintaining a society. Members of a society depend on each other to grow and live their lives. Around this societal system, men and women, and activities big or small, revolve. As far as rights and dignity are concerned, all men and women are equal in the eyes of the law. Mankind's conscience and reasoning are the foundations of human rights. The term **'human rights'** in general, refers to the civil rights, civil liberties, political rights and social and economic rights of a human being.

The Universal Declaration of Human Rights was implemented on December 10, 1948 and is officially recognized by most countries. It includes individual's rights, which can be classified into the following:

- **Civil rights:** They refer to freedom from slavery and servitude, torture and inhuman punishment, and arbitrary arrest and imprisonment: freedom of speech, faith, opinion and expression: right to life, security, justice, ownership, and assembly.
- **Political rights:** They refer to the right to vote and nominate for public office: right to form and join political parties.
- **Social and economic rights:** These refer to the right to education, work, food, shelter, and medical care. These rights establish the 'new' rights, which range from the right to economic welfare and security to the right to share and to live the life of a civilized being.

The concept of human rights implies that a human being is equal in the eyes of the law irrespective of his or her caste, creed, colour, nationality, etc. Thus, 'equality' and 'dignity' are the fundamental principles of human rights. Human rights should not be compromised on as these have been enshrined in the Constitution of India. As members of society, we need to create a conducive environment, not only for normal residents but also for the downtrodden and the needy. Every single individual should be able to grow mentally, physically, and socially and should lead a happy life. This can only be achieved if we respect each other's individuality and self respect and treat others as we would like others to treat us.

### 1.2.1 Meaning and Significance of Human Rights and Duties

The concept of human rights is quite old. A general view of human rights considers all human beings to be equal in the eyes of the law. Human rights are inherent, individual and automatically exercised. At the international level, the legal standard of human rights has been adopted since 1948 in the UN Universal Declaration of Human Rights. Later on, in 1966 in the International Covenant on Civil and Political Rights and the International Covenant on Economic, Social and Cultural Rights were codified.

The content and scope of human rights are still debated. Some limit them to the traditional civil liberties and political freedoms whereas others extend to a broader concept that includes social and economic rights. Human rights are important for all individuals and an ideological starting point is respect for human dignity and a final purpose is that it is a guarantee of basic rights. The international and national community has initiated steps time and again to promote and protect human rights by a number of ways.

Every human being is entitled to some basic rights, which are neither created nor can be withdrawn from them. These rights are commonly known as human rights.

Human right is a generic term and embraces civil rights, civil liberties and social, economic and cultural rights. Human rights are rights and freedoms to which all humans are entitled. For the reason of being human beings, we are entitled to certain rights. These rights are justified as moral norms and exist as shared norms of humanity. These are natural rights based on reasons or legalese. No consensus, however, no consensus is available for the precise nature of what should/should not be regarded as a human right.

English philosopher *John Locke* (1632–1704) defined them as absolute moral claims or entitlements to life, liberty, and property. One of the finest expressions of human rights is in the US Declaration of Rights (1776) which proclaims that 'all men are by nature equally free and independent and have certain inherent natural rights of which when they enter a society they cannot be deprived or divest their posterity.' These are also called fundamental rights.

*Ex-chief Justice of India, J.S. Verma,* (1978) stated that 'human dignity is the quintessence of human rights. All those rights, which are essential for the protection and maintenance of dignity of individuals and create conditions in which every human being can develop his personality to the fullest extent, may be termed human rights. However, dignity has never been precisely defined on the basis of consensus, but it accords roughly with justice and good society.

*The World Conference on Human Rights* (1993) held in Vienna stated in that all human rights derive from the dignity and worth inherent in the human person, and that the human person is the central subject of human rights and fundamental freedoms.

Constitutional commentator *D. D. Basu* (2008) defines human rights as those minimum rights, which every individual must have against the state or other public authority by virtue of his being a member of human family, irrespective of any other consideration.

Thus, it could be understood from these definitions that human rights are, those rights that belong to an individual as a consequence of being human and are a means to human dignity. They are provided to all men everywhere at all times.

Human beings should be protected against unjust and mortifying treatment by fellow human beings. Arbitrary power cannot be operated on them. A State or any other such organized community can realize human rights. In a state of anarchy, where there is lawlessness and chaos, human rights cannot be expected to be invoked. These rights are required for the holistic development of human beings in society and should be protected and available at all costs.

Human rights are indivisible and interdependent, and there is no differentiation in the typology of human rights. All human rights are equally important, inherent in all human beings. The Universal Declaration of Human Rights has not categorized human rights but simply enumerated them in different articles. The most common categorization of human rights is as follows:

1. Civil and political rights, and
2. Economic, social and cultural rights

**1. Civil and political rights:** Civil and political rights are enshrined in Articles 3 to 21 of the Universal Declaration of Human Rights (UDHR) and in the International Covenant on Civil and Political Rights (ICCPR). Civil rights or liberties are referred to those rights, which are related to the protection of the right to life and personal liberty. These are essential for living a dignified life. Right to life, liberty and security of persons, right to privacy, home and correspondence, right to own property, freedom from torture, inhuman and degrading treatment, freedom of thought, conscience and religion and freedom of movement are inclusive of these rights. Political rights allow a person to participate in the state governance. Right to vote, right to take part in the conduct of public affairs, directly or through chosen representatives are instances of political rights.

Civil and political rights can be protected by the State, are cost-free and could be immediately provided if the state decides to. The provision of these rights is easy to judge and measure. They are justifiable real legal rights.

**2. Economic, social and cultural rights:** Economic, social and cultural rights are enshrined in Articles 22 to 28 of the Universal Declaration of Human Rights (UDHR) and in the International Covenant on Economic, Social and Cultural Rights (ICESCR). Economic, social and cultural rights (also called 'freedom to') are related to the guarantee of minimum necessities of the life to human beings. The existence of human beings is likely to be endangered in the absence of these rights. Right to adequate food, clothing, housing and adequate standard of living, freedom from hunger, right to work, right to social security, right to physical and mental health and right to education are included in this category of rights. These are positive rights; which means that these require positive entitlements by the state. These rights are massive investments and are by nature progressive. Social and economic rights are cannot be measured quantitatively and it is difficult to determine if these have been breached.

Karel Vasak (1977) the first secretary general of the International Institute of Human Rights, has categorized human rights into three generations. The first comprise of civil and political rights which have been derived from reformist theories associated with the French, English and American Revolutions of the 17th and the 18th centuries. They were first enshrined at the global level by *Universal Declaration of Human Rights, 1948,* and given status in international law in Articles 3 to 21of the Universal Declaration.

The second generation of human rights was recognized by governments after World War I. These are associated with equality and were fundamentally economic, social and cultural in nature. Secondary second generation rights include the right to be employed, right to housing, etc. They are also incorporated in the Universal Declaration of Human Rights, and further embodied in Articles 22 to 27 of the Universal Declaration, and the International Covenant on Economic, Social and Cultural Rights.

Third generation of human rights go beyond the mere civil and social rights. They have been expressed in many progressive documents of international law, like the 1972 Stockholm Declaration of the United Nations Conference on the Human Environment, the 1992 Rio Declaration on Environment and Development. The term third-generation human rights are largely unofficial, and have not been enacted in legally binding documents. These include an extremely broad spectrum of rights such as:

- Group and collective rights
- Right to self determination
- Right to economic and social development
- Right to a healthy environment

- Right to natural resources
- Right to communicate and communication rights
- Right to participation in cultural heritage
- Rights to intergenerational equity and sustainability

In this categorization of human rights, the third generation is the most debated and lacks both legal and political recognition. This is explained in Table 1.1.

*Table 1.1 Three Generations of Human Rights*

| | First generation | Second generation | Third generation |
|---|---|---|---|
| **Name** | Civil and political rights | Economic, social and cultural rights | Collective rights |
| **Example** | Right to life, liberty and security privacy, home and correspondence, own property, freedom from torture, freedom of thought, conscience and religion and freedom of movement | Right to adequate food, clothing, housing and adequate standard of living, freedom from hunger, right to work, right to social security, right to physical and mental health and right to education | Right to self determination, economic and social development, healthy environment, natural resources |

Despite different meanings and explanations, the basis of all the rights is that they are derived from the inherent dignity of the human beings and are essential for free and full development.

## Characteristics of Human Rights

As per United Nations System and Human Rights (2000), human rights are universal legal guarantees protecting individuals and groups against actions that interfere with fundamental freedoms and human dignity.

Some of the most important characteristics of human rights are as follows:

- Guaranteed by international standards
- Legally protected
- Focus on the dignity of the human being
- Oblige states and state actors
- Cannot be waived or taken away
- Interdependent and interrelated
- Universal

Human rights are natural rights that stem from human dignity and have some peculiar characteristics. These are described as follows:

1. **Internationalism:** United Nations Charter, the Universal Declaration of Human Rights, and the Vienna Declaration of Human Rights guarantee respect for human dignity and the right to pursue happiness. These international efforts have been agreed on internationally making human rights a subject of international concern. All the countries are expected to observe these right equally and with sincerity. Consequently, the guarantee of human rights is given not only by individual States but by the international community as a whole. It is a vital and ever-increasing issue. It has become the common ideology of the whole international community that is beyond State borders.
2. **Universality:** Human rights go along with the progress of human society, and have always been a universal concern of human beings in various international documents. The dignity, worth and right to happiness of all must be accepted without any condition or clause. Race, colour, sex, language, religion, political opinion, nation, social position, property, origin or other circumstance should not be used for discrimination and that everybody is endowed with all rights and freedoms. Moreover, nobody can be discriminated against because of membership in a particular self-governed or dependent state, nor limited in his rights because of political, legislative or international position. They are objectively accorded regardless of anyone's will.
3. **Inheritance:** Human rights guarantee human dignity and because they were given originally to the people they are recognized as natural inherent rights. Human rights are not granted in accordance with any law or by any State.
4. **Absoluteness:** Human rights are inalienable rights. So, they are recognized universally and are absolute rights. The essence of human personality, human dignity and worth, confirms them to be inviolable. As such the State must guarantee the people's dignity, respect and happiness by preventing any law which would do otherwise.
5. **Inviolability:** Human rights cannot be violated as they are inherent and are internationally enforced. In addition to this, the guarantee of human rights is the duty of the State. The State should neither alienate these rights nor, limit or violate them.
6. **Permanence:** Human rights are not to be guaranteed temporarily for a certain period of time but should be permanently assured of which nobody could be deprived. The dignity and worth of human beings does not change over time by the status or position
7. **Individuality:** Human rights have their basis in people's dignity, worth and happiness. Every human being is independent and each person possesses a right to be independent which cannot be taken away in lieu of any other thing. Every person has a right to determine own destiny, which is a prerequisite of personal right. In simple terms, human rights are a subject of neither a nation nor of a collective body, but of the individual.
8. **Self-determination:** All people have the right to self-determination on the basis of inherent human dignity. It means that all people freely determine their own political position and independence, seek their own economic, social and cultural development. As human dignity, worth and happiness are intrinsic to personal rights, personal rights become a necessary prerequisite for the individuals to determine their own destiny. The subject of human rights is natural human, so individuals have the right to determine their lives.
9. **Self-evidence:** Men are born equal and with certain fixed, inherent, inalienable rights, including the right to life, freedom and happiness. This is accepted as a self-evident truth.

10. **Fundamental:** Human rights include the principle of obtaining a guarantee of human dignity, worth and happiness. It is a fundamental norm and produces a basic principle, which has become a standard for analysing the essence of effectiveness of laws and ordinances. Thus, it should be considered a standard of human dignity and worth as far as it is included, both in establishing the laws and analysing them.

## 1.3 BASES AND SOURCES OF HUMAN RIGHTS

The initial point of conception of human rights can be located in the notion of 'natural rights' that was propounded in the 17th century by John Locke, who urged that certain rights are 'natural' to individuals on the basis of being human. He asserted that these have existed even before the development of societies and emergence of the state. Proponents of natural rights urged that natural rights are inherent to an individual simply because he or she belongs to the human species and not because he or she is a citizen of a particular country. Its tone was radical and in its ultimate employment, was revolutionary. Historically, the rising commercial/middle class made the demand for individual rights, which was the result of industrial revolution. The American Independence Movement of 1776 and the French Revolution of 1789 were inspired by the ideal of natural rights and both movements sought to challenge governments that curtailed the natural rights of people.' The Preamble to the American Declaration of Independence, 1776, reads:

> All men are created equal, that they are endowed by their Creator with certain unalienable Rights that among these are Life, Liberty and the pursuit of Happiness. That to secure these rights, governments are instituted among Men, deriving their just powers from the consent of the governed. That whenever any Form of Government becomes destructive of these ends, it is the Right of the People to alter or to abolish it, and to institute new Government, laying its foundation on such principles and organizing its powers in such form, as to them shall seem most likely to effect their Safety and Happiness.

However, it was during the French Revolution in 1789 that natural rights were elevated to the status of legal rights with the formulation of the 'Declaration of the Rights of Man'. The Declaration defined the 'natural and imprescriptible rights of man' as 'liberty, property, security and resistance to oppression.' The American Bill of Rights in 1791 also incorporated natural rights. The above conception of natural rights was deployed in several political and social movements through the 19th century. For instance, the Suffragette Movement was based on the natural equality between a man and a woman. The different views of various thinkers were put forward regarding bases of rights, according to which, various theories have been propounded.

**Check Your Progress**

1. What is the foundation of human rights?
2. What are civil rights?
3. Who was John Locke and how did he define human rights?
4. When did the second generation of human rights come into existence?
5. Why do human rights guarantee human dignity?

### 1.3.1 Sources of Human Rights

The recognition of human rights law has been developing extensively since the creation of the United Nations. It establishes a set of rules for all the people across the globe. The variety of sources from where international human rights laws have been derived is as follows:

- **Religion:** The term 'human right' as such is not found in most of the world's religions. Nonetheless, theology serves as the basis of a human rights theory stemming from a law higher than the State and whose source is the Supreme Being. This presupposes an acceptance of revealed doctrine as the source of such rights. Every individual is considered sacred in the religious context. The fact that human beings have been created by a common creator gives rise to the theory of a common humanity; from this rise the universality of these rights. A wide intercultural tradition has been constructed by the common bond of religion that supports various principles of justice and equality that underlie human rights.
- **Natural law:** Natural law theory has underpinnings in Sophocles and Aristotle's writings. It was first elaborated during the Greek period and later during the Roman period. Natural law, embodied elementary principles of justice which were right, that is they were in accordance with nature, unalterable and eternal. The natural rights theory evolved from the natural law theory. John Locke, the chief exponent of the natural rights theory developed his philosophy within the framework of the 17th century humanism and enlightenment. The 18th century saw the birth of *absolutism*, against which the natural rights theory provided impetus to revolt. The same impetus is also seen in the French Declaration of the Rights of man, in the American Declaration of Independence. It is also evident in the later States which declared their independence against anti-colonial terrorism and also in the principle United Nations human rights documents. The natural rights theory has identified human freedom and equality from which other human rights originate and has thus contributed tremendously to the evolution of human rights internationally.
- **International treaties:** Treaties are the most important sources of international human rights law. At present, there are a number of multilateral human rights treaties in operation, which are legally binding for the countries that have ratified them. The most important amongst them is the United Nations Charter. It is binding on all the countries in the world and establishes at least general obligations to respect and promote human rights. United Nations has also enacted a number of other multilateral human rights treaties that have created obligations to the contracting parties. European Convention on Human Rights, American Convention on Human Rights and African Charter on Human and People's Rights are other regional treaties on human rights. They are also legally binding on the contracting States. They, therefore, are the sources of international human rights law.
- **International custom:** Certain international human rights have acquired the status of customary international law by their widespread practice by counties and are binding on all whether they have expressed the consent or not. For example, violations such as genocide, slavery or slave trade, the murder or causing the disappearance of individuals, torture or other cruel, inhuman or degrading treatment or punishment, prolonged arbitrary detention, systematic racial discrimination, or a consistent pattern of gross violations of internationally recognized human rights are condemned unanimously. Consequently, they are the source of international law.
- **Judicial decisions:** Decisions of the various national bodies like National Human Rights Commission and international judicial bodies like International Court of Justice and European Court of Human Rights are relevant in the determination of the rules on human rights issues. The decisions of the Supreme Court and high courts on human rights issues have contributed immensely to the development of human rights law. In addition to the judicial decisions,

opinions of the arbitral bodies whose function is to mediate on complaints of human rights violations under the various treaties also help in the determination of the rules relevant to international human rights.

- **Official documentations:** The United Nations and its subsidiary bodies through their official documents have produced a vast amount of records relating to human rights matters. *Human Rights Law Journal, Human Rights Review* and *European Law Review* and the collective work done under the auspices of the international and national bodies are of considerable value.
- **Other international instruments:** A great number of international declarations, resolutions and recommendations connecting to human rights have been adopted with the support of the United Nations. Though they are not legally binding on the States but have established broadly recognized standards in connection with human rights issues. The most important of these is the Universal Declaration of Human Rights of 1948, which has moral or political force for persuading government officials to observe human rights standards. Some of the rights referred therein have acquired the character of customary rule of International Law and also serve as the source of the commitment by the international community.

The above are the important sources of international human rights law but they by no means are exhaustive. Many international and national institutions contribute to the protection of human rights. Further, a variety of actions taken by the United Nations organs and other international bodies have too supported specific efforts to protect human rights.

### Significance of Human Rights

Human rights are universal in nature. All persons everywhere, at all times ought to have something of which no one may be deprived without a grave affront to justice. From this emerges the importance of human rights.

Human rights are the natural rights of the people. It means that they ensure dignity of the people, thus, themselves are the main subject of human rights and fundamental freedoms. They originate from human dignity, which is not granted to the people by the State or the law, but it is nevertheless an inherent, absolute and basic right of the people.

This has been stated in the Virginia Bill of Rights (1776), often called the First Declaration of Human Rights, French Declaration of the Rights of Man and of the Citizen (1789) and in American Declaration of Independence. These declarations state that all people are born free and independent and have the right of their own life. Article 2 of the Universal Declaration of Human Rights also establishes the right to freedom, property, security and resistance.

So, the ideological basis of human rights is human dignity. It is acknowledged universally. All people are born with human dignity and worth, have the right to seek happiness and lead lives worthy of their dignity. Human dignity is the basis of equality and solidarity between human beings in society. It is the absolute worth of human beings existence and thus is the formative element of a human personality.

People have the dignity to exist freely. This dignity requires specific freedoms, namely, self-control and their own personal rights. It gives people the right to be own judges, value formers and designers. Therefore, human dignity is not connected to any law. It is an absolute value entitled to all persons regardless of whether it is stated in the positive law.

The principle of respect for human dignity has value on an ethical and psychological level and as well as on the legislative level. It is applied or enforced by nations in order to force respect for existing laws.





## 1.3.2 Theories of Evolution of Human Rights

The main theories are discussed below.

### 1. Theory of Natural Rights

The theory of natural rights, which is the earliest human rights theory, stated that the main source of all rights of mankind was the supreme being, i.e., God. This theory is also called the 'classical theory of natural rights'. Each individual on this earth has rights, which are not the result of the government policies or law but of nature. It is argued that the legitimacy of government rested on the respect that it accorded to these rights. Natural rights were derived from natural law and were propagated by social contract writers like Hobbes. They assumed that man had certain natural rights before the origin of the state and he surrendered some of them to a superior authority, i.e., civil society, in order to safeguard the rest of them. Hobbes considered right to life as a natural right.

Foremost among the proponents of natural rights doctrine was John Locke (1689). Locke stated that 'all individuals were endowed by nature with the inherent rights to life. Liberty and property which were their own could not be removed or abrogated by the state.' Since the 17th and 18th centuries there has been a powerful opinion in the West attached to the idea that man possesses certain rights 'by nature', irrespective of any particular social, legal or political order and that these rights can be demonstrated by reason. Rights, according to this theory, were attributed to an individual as if these were an intrinsic property of him or her. In short, rights are inherent in the personality of man. They are inalienable, immutable and sacred from the day of his birth and are non-transferable throughout his life time. The rights belong to man independent of society and the state.

### 2. Legal Theory of Rights

The legal theory maintained that rights are not natural but the creation of the state. Only that which the law gives is a right. Rights are not absolute or inherent in man, they are artificial in the sense that they become rights only when they are determined and secured by the state. We find traces of this theory in the writings of Hobbes who held that the right of every individual is that of self-preservation and this right could best be preserved by the state. The legal bases of rights imply the following three things:

(i) The state defines and lays down a bill of rights. Rights are not prior to the state but the state is the source of the right.

(ii) The state lays down a legal framework which guarantees the rights. It is the state which enforces the enjoyment of rights.

(iii) As the law creates and sustains rights, so whenever the content of the law changes, the substance of rights also changes. The legal theory states that the rights may not necessarily be created by the State, but without recognition and protection of the rights by the state, these are not valid.

### 3. Historical Theory of Rights

The historical theory was represented by Friedrich Carl Savigny and Georg Friedrich Puchta in Germany, Sir Henry Maine and Edmund Burke in England and James Carter in the USA. All of them maintained that the character of the state, the law and rights is historical. According to this theory, law, state and rights are neither based upon the arbitrary creation of human will nor a product of nature but a product of history. They represent the manifestation of a certain genius, particularly national consciousness. Rights are the crystallization of 'historical development'. The principles which were applicable to law could be applicable to rights as well, i.e., rights are relative to time and place and to particular people. Rights are to be found not by reason but in the historical process. The idea of universal individual could be traced by the historical development of rights, reforms are impossible, if historical process are not allowed to work without any hindrances, the idea of a transcendental natural order should be replaced by the idea of an order immanent in the historical process.

### 4. Moral Theory of Rights

According to this theory, rights derive their justification from a code of morality shared by the members of a community and are enforced by the conscience of the individual. The main supporters of this theory were Rousseau, Kant, Hegel, Green and Bosanquet. The moral theory associates rights with the achievement of moral freedom of man as member of the society. According to this theory, the basis or rights is not natural or legal but a moral value and a moral object, every right is derived from one basic right, right to personality. Rights are rooted in the personality of the individual. Rights are powers which an individual claims from the society on a moral plane and are recognized and enforced by the state through its law. The inner development of man does not depend upon the State; it is the sole concern of the individual himself. The function of the State is to help in creating the conditions in which the individual can achieve his moral freedom. Rights are thus the external conditions, recognized by the society and enforced by the State, for the moral uplift of man. Since everybody in the society has a similar aim, i.e., to develop his or her personality, it implies that rights arise only in the society and the rights of the individual are to be in harmony with those of others. In other words, rights are linked with the individual good and the common good of the society. Rights are recognized by the society and enforced by the State.

### 5. Social Welfare Theory of Rights

The concept of social welfare was recognized by positive liberal writers of the late 19th and early 20th century like T.H. Green, G.D.H. Cole, L.T. Hobhouse, Harold Laski, and Ernest Barker. According to this theory, a law, custom and natural rights should all yield to what is socially useful or socially desirable. According to Hobhouse, '*Genuine rights* are conditions of social welfare and the various rights the owe their validity to the functions they perform in the harmonious development of society'. Harold Laski in his book, *A Grammar of Politics*, wrote, 'rights are the conditions of social life without which no man can seek to be himself at his best'. The state exists to make possible that achievement and it is only by maintaining rights that such an end can be achieved. Explaining the characteristics of his theory, he writes that the question of rights emerges only in the society. Although it is the claim of an individual, however, it is a claim which he or she shares with others. Hence, rights are related to common ends. The state, by guaranteeing these claims helps the individual in attaining his own well-being as well as the others.



Individual good is an integral part of social good. Second, rights are correlative with functions. The enjoyment of rights can be justified by the functions an individual performs in terms of his contributions to the social end. Thirdly, rights are a claim upon the state and the state should create conditions for the realization of these rights. In this context, the state can put certain limitations on the rights in the interest of social welfare, but if these restrictions become unreasonable, it loses its moral authority and the individual does not only have a right but also certain duties towards the state. Fourthly, being the conditions of social welfare.

In short, the social welfare theory believes that rights are conditions of social welfare, the question of rights emerges in the society; no individual has any right against the welfare of the society. Rights are given to the individual so that he can contribute to the social good from the individual good. If the state is made popular due to the rights it provides, the rights are known by the amount of social welfare they can achieve.

### 6. Liberal-Individualistic Theory of Rights

The liberal-individualistic theory of rights has come to be dominated by the view of American philosophers John Rawls and Robert Nozick. These have achieved much prominence in liberal tradition and have been instrumental in influencing other writers like Dworkin and Galstone. They represent two dominant socio-economic views of our times. While Nozick represents the classic liberal view of free market, free trade capitalism and minimalist state, Rawls represents the Keynesian tradition of liberal egalitarianism. He appeals to those who believe in the desirability, efficiency and future of capitalist market maintaining that the latter cannot function well and will generate serious inequalities. He wants to find efficient ways address to those inadequacies without altering the essential nature of the system.

According to Robert Nozic, American Libertarian philosopher, the theory of rights derived from principle of natural right of 'self-ownership', which means treating people as they are an end in themselves.

One of the popular Nozic quotes is given below:

> 'The individuals have rights and there are things no person or groups may do to them (without violating their rights). So strong and far-reaching are these rights that they raise the question of what, if anything, the state and its officials may do. How much room do individual rights leave for the state?'

Society must respect these rights because individuals are ends and not means. Rights affirm the separate existence of man, and taken seriously, they mean that the individual are the resources of some other persons. Respect for rights is respecting people's claim to be equal.

John Rawls, American philosopher, uses the words 'rights' and 'justice' interchangeably. According to him, all account of rights must be embedded in justice. Rights belong to all disinterested political-individuals beyond the veil of ignorance. However, they had no natural rights except those which they choose unanimously in their original position. They were accepted because of the considered judgment of people. By basic liberties, Rawls means the standard civil and political rights recognized by the liberal democracies such as right to vote, right to run for offices, due process of law, free speech, etc. But what is important for him is that rights should guarantee a fair share of economic-resources.

Hence the second category gives certain egalitarian rights to citizens. The social and economic inequalities should be so regulated that those with least material goods, such as income, wealth education, etc., will get a larger share.

### 7. Marxist Theory of Rights

Marx was the first person who talked about exploitation of labourers or violation of workers' rights. He claimed that the law of nature was idealistic as well as historical. Hence, the 17th and 18th centuries bourgeois revolutionaries' claims that rights were inalienable and imprescrthiptible were unsustainable and indefensible. As per Marx, rights were a result of the middle-class capitalist society.

As per the Marxist theory, the fundamental nature of a human being was social and that he or she made use of his or her ability to fulfil needs. The Marxist doctrine states than an individual's ability to do or achieve something can only be conceived if he or she reverts back to being social. However, an individual can only become truly social when he or she lives in a purely communist society, which does not allow any kind of class conflict and where the means of production are enjoyed by all. As such, these rights can only be social and economic, since they are directed towards the reduction of the means of production to common control. The need for rights disappears, since each individual will be in a free and spontaneous relationship with all other individuals.

The Marxian analysis is the most detailed examination of the process of capitalist development. Marx contributed to the theory of economic development in three ways. He provided a thorough economic interpretation of history, specified the motivational forces of capitalist development, and gave suggestions for an alternative path of planned economic development. If one interprets history, materialistically, he or she will find that every historical event has been a product of the on-going conflict between the various classes of the society. The reason of this conflict is due to the clash between the relation of production and its mode. Therefore, Marx advised that it was beneficial to have a planned economy, wherein a central planning agency would formulate plans for everything. To him, communistic form of society is better for greater economic growth, stability and happiness.

The analysis of different theories and views developed by very important jurists and economists shows that though there are differences of opinion in defining the term human rights, all are uniform in emphasizing the fact that there should not be any human rights violation. Each also agrees that human rights violations cause significant damage to the whole economy by reducing an individual's welfare and happiness.

## 1.3.3 Promotion and Protection of Human Rights

United Nations makes continuous efforts towards the promotion and encouragement of respect for and observance of human rights and fundamental freedoms. Promotion of human rights refers to establishing of international standard of human rights, education and dissemination. The primary responsibility for the promotion of human rights under the UN Charter is with the General Assembly, in the Economic and Social Council and its subsidiary body, the Commission on Human Rights. The General Assembly, by adopting treaties, has set standards and socializes into those standards. It holds conferences and seminars to spread the information about human rights values found in the international documents.





Protection of human rights refers to implementation and enforcement action. The Security Council and the International Court of Justice has the authority to engage in enforcement action. They could pass a binding resolution or issue a binding judgment. Enforcement is the authoritative application of human rights. All other actions beyond promotion are considered as implementation efforts. Implementation thus includes passing non-binding resolutions about specific problems or States. When a UN agency approves a resolution calling on a specific State to take specific human rights action, it generates political pressure on the target and thus an effort at protection of human rights. The United Nations in the past has been able to promote and protect human rights by a number of ways, which are as follows:

- **Consciousness about human rights:** Awareness generation and making the people and the States conscious about the human rights is the first step towards securing justice. The proclamation of the Universal Declaration of Human Rights containing the universal code of human rights may be regarded as the first step towards the promotion and protection of human rights.
- **Enactment of the law of human rights:** The United Nations has codified the different rights and freedoms by making treaties for different sections of the people such as women, child, migrant workers, refugees and stateless persons. In addition to the above, the prohibition on the commission of inhuman acts such as genocide, apartheid, racial discrimination and torture have been brought within the international rule of law.
- **Monitoring of human rights:** Allegations of abuse of human right are monitored and investigated by: Treaty bodies, Special Rapporteurs and Working Groups of the Commission on Human Rights. A number of expert committees have been established under particular treaties and their resolutions on specific cases carry a moral weight and governments are obliged to follow them.
- **Redress of individual's complaints:** There are a large number of human rights treaties that permit individuals to make petition before the appropriate international bodies. For instance, the International Convention on the Elimination of All Forms of Racial Discrimination, Convention against Torture, provides the scope to individuals to make petitions against their States for violation of the human rights.
- **Compilation of information on the violations of human rights:** The task of compiling information on the incidents of violations, or violation in a specific country is performed by Special Rapporteurs/Representative or Working Groups. They gather facts, keep contacts with local groups and government authorities, conduct on-site visits and make recommendation on how human rights institutions might be strengthened.
- **Assessment of human rights situations:** The Commission on Human Rights could request the Secretary-General to intervene or send an expert to examine a human rights situation in any State with a view to prevent blatant violations. The Secretary-General could perform these tasks and may seek UN concern and curb abuses such as the release of prisoners, commutation of death sentences and other issues.
- **Organization of human rights activities:** The High Commissioner for Human Rights strengthens and coordinates human rights activities of the UN. The Commissioner is responsible for promoting and protecting the effective

enjoyment human rights by all and maintains a permanent dialogue with the member States.

- **Advisory services:** The Center for Human Rights provides advisory service to different governments to improve their human rights performance. It also renders assistance to improve electoral laws, establish or upgrade human rights institutions, prepare new criminal codes, or refurbish the judiciary.

### 1.3.4 Human Rights Values and Indian Culture

India is a pluralistic and multi-cultural society where many faiths and belief systems regulate the life of individuals. India is not a Hindu society even though Hinduism is the religion of the vast majority of the people. In this part of the globe many religious traditions, both indigenous and foreign, have been established over the years. We have Buddhism, Sikhism, Bhakti cult, Sufi tradition as well as Islam and Christianity. Many religious gurus, law-givers, social reformers and statesmen have come to guide and influence the life and culture of Indians. The *Mahabharata*, *the Ramayana*, the *Bhagvat Gita* as well as the Quran, the Bible, the Guru Bani, etc., have molded the thinking pattern and consciousness of Indians. So also the Hindu caste system and the joint family pattern have a decisive influence on the followers of other religions.

The struggle for human rights essentially reflects the concerns and requirements of modern human being whereas the cultural values operated in a traditional context where many of the agencies which at present account for the violation of human rights norms were not known.

#### 1. Duty-First Approach

Broadly speaking Indian culture never saw the individual and society as antagonistic to each other. The Hindu vision was that of an orderly society, with each individual doing his assigned job. The individual and society were viewed as two complementary and incomplete entities tied to a relationship of mutual obligations, a commitment which was essential to ensure the well-being of all. Those who acted as the guardians of society and worked out the delicate nuances and detailed network of the social order were neither concerned about, nor even conscious of, the concept of human rights.

#### 2. *Nishkama Karma*

Another dictum of the Gita which has taken deep roots in the Indian mind is*Karmanye badhika rastu ma falesu kadachan*. That is, one must go on performing one's duties without being worried about the rewards or the results.

#### 3. *Ahimsa* and human rights

The *Ahimsa* can be identified as another key Indian cultural value which ensures the rights by implication and interpretation.

This topic is discussed in detail in **Unit 4**.

**Check Your Progress**

6. Who propounded the concept of natural rights?
7. What are the legal bases for rights?
8. According to Robert Nozic, the theory of rights derived from principle of natural right of _____.
9. Identify the sources of human rights.

## 1.4 UN CHARTER

After the First World War, the League of Nations was established in the year 1921 to prevent such a war in the future. However, the League of Nations proved a failure due to many reasons and the Second World War began in the year 1939, with the world facing another event of large-scale mass destruction and violation of humanity. Efforts for the creation of an international organization, in order to establish peace, were being made even during the Second World War. A number of conferences and meetings were held, in which many declarations were adopted like the Declaration of St. James Palace (1941), Atlantic Charter (1941), United Nations Declaration (1942), Moscow Declaration (1943), Tehran Declaration (1943), Dumbarton Oaks Conference (1944) and San Francisco Conference (1945). The result of these conferences and declarations was the establishment of an international organization to maintain peace and security in the world. This way, in the year 1945, United Nations came into existence on 24 October.

At the San Francisco Conference, delegates of many nations expressed that the United Nations should establish an International Bill of Rights. However, the concept of the International Bill of Rights did not gain much ground but many nations realized that it should be an obligation of the international community to promote human rights. The conference resulted in the adoption of the United Nations Charter containing some provisions which were general in nature and vague in the context of promoting and protecting human rights and fundamental rights.

In the Second World War, very serious human rights violations occurred in Germany. Hitler and his forces had killed millions of Jews. There were concentration camps and gas chambers. Prof. Raphael Lemkin expert on international law coined a new word to describe that phenomenon is *genocide*. In this backdrop, the charter of the United Nations (UN) was signed on 26 June 1945, in San Francisco, at the conclusion of the United Nations Conference on International Organization, and came into force on 24 October 1945. Ever since, this day is being celebrated the world over as the UN Day. The Statute of the International Court of Justice is an integral part of the Charter.

The UN Charter, which marks a major watershed event in the evolution of modern International Human Rights Law, needs to be viewed in the historical context of egregious human rights violations that occurred during First World War and Second World War. Its provisions reflect the desire of the international community not to let such events recur by resolving to protect and promote human rights of all persons.

The preamble of the UN Charter asserts that, we the people of the United Nations determined to save succeeding generə'ions from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind.

It goes on to:

- Reaffirm faith in fundamental human rights, in the dignity and worth of the human person, in the equal rights of men and women and of nations large and small,
- Establish conditions under which justice and respect for the obligations arising from treaties and other sources of international law can be maintained, and
- Promote social progress and better standards of life in larger freedom.

The Article 1 of UN Charter proclaims the Purposes of the United Nations as follows:

- To maintain international peace and security, and to that end
- To develop friendly relations among nations

- Promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion
- To be a centre for harmonizing the actions of nations in the attainment of these common ends

The UN Charter provided for the creation of six principal organs mandated to carry out the overall work of the UN. These Charter-based organs are for the formulation, drafting, and adoption of instruments as well as supervision. They include the General Assembly, the Economic and Social Council, the Security Council, the International Court of Justice, the Secretariat (of which the UN Secretary-General is a part) and the Trusteeship Council (suspended 1.11.95).

The UN Charter spells out the responsibilities of various principal organs including those relating to human rights in Articles 13, 55, 56, 62 and 68.

Article 55 under Chapter 9, dealing with the International economic and social co-operation, states that the UN shall promote:

- Higher standards of living, full employment, and conditions of economic and social progress and development
- Solutions of international economic, social, health, and related problems; and international cultural and educational cooperation
- Universal respect for, and observance of, human rights and fundamental freedoms for all without distinction as to race, sex, language, or religion.

In order to give practical shape to the promise contained in Article 55, Article 56 of UN Charter asserts that, all Members pledge themselves to take joint and separate action in cooperation with the organization for the achievement of the purposes set forth in Article 55. The above of course includes 55 (c) dealing with human rights.

Over sixty-five years back, before the adoption of the UN Charter, the way a country treated its own citizens was a matter of purely domestic concern. Other countries had no role whatsoever in it. Today, it is no longer so. If there is injustice and violation of human rights in any corner of the world, it is a matter of genuine concern to other countries. They could express concern about it and raise their voice against it. The legal basis for doing so arises from the fact that all countries are signatories to the UN Charter and by virtue of this fact, they had pledged to take joint and separate action to promote respect for and observance of human rights for all without any distinction.

Soon after the adoption of the UN Charter, work started on the International Bill of Rights. The international community decided that it will take a three pronged approach: a general declaration, a legally binding convention and measures of implementation. Economic and Social Council constituted a Commission on Human Rights and entrusted the work of drafting the International Bill of Rights to it. On 10 December 1948, the *universal declaration of human rights* was adopted by the UN General Assembly.

## 1.5 HUMAN RIGHTS AND PROVISIONS OF UDHR

After the United Nations Charter came into force, the most important task before the United Nations was the implementation of the principles of the universal respect and observance of human rights and fundamental freedoms for all without distinction as





to race, sex, language or religion as laid down under *Article 55* of the UN Charter. The Economic and Social Council (ECOSOC) recommended before the General Assembly that the purpose of the UN with regard to the promotion and observation of human rights could be fulfilled only if provision was made for an International Bill of Rights and for its implementation, in the year 1946. The General Assembly referred the matter to the ECOSOC for the preparation of the International Bill of Rights. ECOSOC referred the matter to the Commission on Human Rights with guidelines for the preparation of the document.

The Commission on Human Rights appointed a Drafting Committee for preparing the International Bill of Rights. The Drafting Committee in its first session (9 – 25 January 1947), prepared a preliminary draft of the International Bill of Rights which was submitted before the Commission on Human Rights in the second session (2 – 17 December 1947). The Commission, due to the differences of opinion as to its forms and contents, decided to apply the term 'International Bill of Rights' to a series of documents. The Commission decided to draw up two sets of documents simultaneously, i.e., a draft declaration of a declaration of general principles on human rights, and a draft convention, which would be a convention on such specific rights as would lend themselves to binding legal obligations. The Commission established working groups to prepare the documents. After submission of reports by the working groups, the Commission forwarded these reports to the governments of the member countries for their comments. On receiving comments from the governments the Commission endorsed the matter to the Drafting Committee to re-draft the documents (Declaration). The Committee re-drafted the entire Declaration.

The Commission in its third session (June 1948) discussed the report and finally adopted a draft of the Declaration for submission to the ECOSOC. The ECOSOC submitted the draft before the General Assembly. The General Assembly adopted the report through a resolution (Resolution 217 on 10 December 1948) known as the Universal Declaration of Human Rights in Geneva. The Declaration consisted of 30 Articles with a Preamble.

UDHR elucidated the UN Charter provisions and defined expressly certain human rights and fundamental freedoms which need to be protected. It may be noted that 'Human Rights Day' is also celebrated all over the world on 10 December marking the adoption of the Declaration.

The preamble speaks of inherent dignity and of the equal and inalienable rights of all members of the human family as the foundation of freedom, justice and peace in the world. Member states pledge to achieve, in co-operation with the UN, the promotion of universal respect and observance of human rights and fundamental freedoms. The Preamble states the following:

> Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,
>
> Whereas disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind, and the advent of a world in which human beings shall enjoy freedom of speech and belief and freedom from fear and want has been proclaimed as the highest aspiration of the common people,
>
> Whereas it is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law,

NOTES

Whereas it is essential to promote the development of friendly relations between nations,

Whereas the peoples of the United Nations have in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedom,

Whereas Member States have pledged themselves to achieve, in co-operation with the United Nations, the promotion of universal respect for and observance of human rights and fundamental freedoms,

Whereas a common understanding of these rights and freedoms is of the greatest importance for the full realization of this pledge.

Now, Therefore THE GENERAL ASSEMBLY proclaims THIS UNIVERSAL DECLARATION OF HUMAN RIGHTS as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of Member States themselves and among the peoples of territories under their jurisdiction.

The Preamble proclaims the Declaration as a common standard of achievement of all peoples and all nations. If this proclamation is to be interpreted as a recommendation, a question arises as to whom this recommendation has been made. It is not addressed either to the Members or to the States or to the Governments. To ease the confusion, Kelsen says that the General Assembly recommends to every individual and every organ of the society to do something with respect to the human rights laid down in the Declaration.

The objective of UDHR is to promote and safeguard various rights of human beings. The UDHR with various provisions enumerates the basic postulates and principles of human rights in a most comprehensive manner. It deals not only with civil and political rights, but with social and economic rights as well.

## I. General provisions

### Article 1

All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

### Article 2

Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status. Furthermore, no distinction shall be made on the basis of the political, jurisdictional or international status of the country or territory to which a person belongs, whether it is independent, trust, non-self-governing or under any other limitation of sovereignty.

## II. Civil and political rights

### Article 3

Everyone has the right to life, liberty and security of person.





NOTES

### Article 4

No one shall be held in slavery or servitude; slavery and the slave trade shall be prohibited in all their forms.

### Article 5

No one shall be subjected to torture or to cruel, inhuman or degrading treatment or punishment.

### Article 6

Everyone has the right to recognition everywhere as a person before the law.

### Article 7

All are equal before the law and are entitled without any discrimination to equal protection of the law. All are entitled to equal protection against any discrimination in violation of this Declaration and against any incitement to such discrimination.

### Article 8

Everyone has the right to an effective remedy by the competent national tribunals for acts violating the fundamental rights granted him by the constitution or by law.

### Article 9

No one shall be subjected to arbitrary arrest, detention or exile.

### Article 10

Everyone is entitled in full equality to a fair and public hearing by an independent and impartial tribunal, in the determination of his rights and obligations and of any criminal charge against him.

### Article 11

(1) Everyone charged with a penal offence has the right to be presumed innocent until proved guilty according to law in a public trial at which he has had all the guarantees necessary for his defence.

(2) No one shall be held guilty of any penal offence on account of any act or omission which did not constitute a penal offence, under national or international law, at the time when it was committed. Nor shall a heavier penalty be imposed than the one that was applicable at the time the penal offence was committed.

### Article 12

No one shall be subjected to arbitrary interference with his privacy, family, home or correspondence, nor to attacks upon his honour and reputation. Everyone has the right to the protection of the law against such interference or attacks.

### Article 13

(1) Everyone has the right to freedom of movement and residence within the borders of each state.

(2) Everyone has the right to leave any country, including his own, and to return to his country.

NOTES

### Article 14

(1) Everyone has the right to seek and to enjoy in other countries asylum from persecution.

(2) This right may not be invoked in the case of prosecutions genuinely arising from non-political crimes or from acts contrary to the purposes and principles of the United Nations.

### Article 15

(1) Everyone has the right to a nationality.

(2) No one shall be arbitrarily deprived of his nationality nor denied the right to change his nationality.

### Article 16

(1) Men and women of full age, without any limitation due to race, nationality or religion, have the right to marry and to find a family. They are entitled to equal rights as to marriage, during marriage and at its dissolution.

(2) Marriage shall be entered into only with the free and full consent of the intending spouses.

(3) The family is the natural and fundamental group unit of society and is entitled to protection by society and the State.

### Article 17

(1) Everyone has the right to own property alone as well as in association with others.

### Article 18

Everyone has the right to freedom of thought, conscience and religion; this right includes freedom to change his religion or belief, and freedom, either alone or in community with others and in public or private, to manifest his religion or belief in teaching, practice, worship and observance.

### Article 19

(1) Everyone has the right to freedom of opinion and expression.

(2) No one shall be arbitrarily deprived of his property.

This right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers.

### Article 20

(1) Everyone has the right to freedom of peaceful assembly and association.

(2) No one may be compelled to belong to an association.

### Article 21

(1) Everyone has the right to take part in the government of his country, directly or through freely chosen representatives.

(2) Everyone has the right of equal access to public service in his country.



(3) The will of the people shall be the basis of the authority of government; this will shall be expressed in periodic and genuine elections which shall be by universal and equal suffrage and shall be held by secret vote or by equivalent free voting procedures.



NOTES

## III. Economic, social and cultural rights

### Article 22

Everyone, as a member of society, has the right to social security and is entitled to realization, through national effort and international co-operation and in accordance with the organization and resources of each State, of the economic, social and cultural rights indispensable for his dignity and the free development of his personality.

### Article 23

(1) Everyone has the right to work, to free choice of employment, to just and favourable conditions of work and to protection against unemployment.

(2) Everyone, without any discrimination, has the right to equal pay for equal work.

(3) Everyone who works has the right to just and favourable remuneration ensuring for himself and his family an existence worthy of human dignity, and supplemented, if necessary, by other means of social protection.

(4) Everyone has the right to form and to join trade unions for the protection of his interests.

### Article 24

Everyone has the right to rest and leisure, including reasonable limitation of working hours and periodic holidays with pay.

### Article 25

(1) Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.

(2) Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

### Article 26

(1) Everyone has the right to education. Education shall be free, at least in the elementary and fundamental stages. Elementary education shall be compulsory. Technical and professional education shall be made generally available and higher education shall be equally accessible to all on the basis of merit.

(2) Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.

NOTES

(3) Parents have a prior right to choose the kind of education that shall be given to their children.

### Article 27

(1) Everyone has the right freely to participate in the cultural life of the community, to enjoy the arts and to share in scientific advancement and its benefits.

(2) Everyone has the right to the protection of the moral and material interests resulting from any scientific, literary or artistic production of which he is the author.

## IV. Concluding provision

### Article 28

Everyone is entitled to a social and international order in which the rights and freedoms set forth in this Declaration can be fully realized.

### Article 29

(1) Everyone has duties to the community in which alone the free and full development of his personality is possible.

(2) In the exercise of his rights and freedoms, everyone shall be subject only to such limitations as are determined by law solely for the purpose of securing due recognition and respect for the rights and freedoms of others and of meeting the just requirements of morality, public order and the general welfare in a democratic society.

(3) These rights and freedoms may in no case be exercised contrary to the purposes and principles of the United Nations.

### Article 30

Nothing in this Declaration may be interpreted as implying for any State, group or person any right to engage in any activity or to perform any act aimed at the destruction of any of the rights and freedoms set forth herein.

## Significance of UDHR

UDHR is the primary international articulation of the fundamental and inalienable rights of all members of the human family. It represents the first comprehensive agreement among nations as to the specific rights and freedoms of all human beings. Among others, these include civil and political rights, such as the right not to be subjected to torture, to equality before the law, to a fair trial, to freedom of movement, to asylum and to freedom of thought, conscience, religion, opinion, and expression. The rights outlined in the UDHR also include economic, social, and cultural rights such as the right to food, clothing, housing, and medical care, to social security, to work, to equal pay for equal work, to form trade unions and to education. Besides, it subsumes a comprehensive and common vision of inalienable human rights and shared understanding of what constitutes the inalienable rights and freedoms of all human beings in every corner of the globe.

The rights set forth in the UDHR have been reiterated and affirmed in numerous international human rights treaties dealing with specific populations or with specific rights and freedoms. The rights have also been incorporated into regional human





NOTES

rights treaties and documents, such as the 'European Convention of Human Rights,' the 'European Social Charter,' the 'African Charter of Human and Peoples Rights,' and the 'Helsinki Accords.' According to Henry Steiner and Philip Alston, to this day it retains its symbolism, rhetorical force, and significance in human rights movement. It is the parent document, the initial burst of enthusiasm, terser, more general, and grander than the treaties, in some sense the constitution of the entire movement. It remains the single most invoked human rights instrument.

The Declaration is inspirational and recommendatory rather than being, in a formal sense, binding. It is an authoritative statement of basic rights to which all are entitled. It represents a major milestone in human progress, bringing to realization to the charter principle that universal respect for human rights is the common concern of all governments and all peoples, and serves as conscience for the world and a standard against which the attitudes of societies and governments can be measured. It is accepted almost universally as a gauge by which governments can measure their progress in the protection of human rights. Invoked constantly in General Assembly, Security Council and other organs, it is quoted in international legal instruments.

In this way, the main objective of UDHR is to present the ideals of human rights and freedoms in order to inspire everybody to work for their progressive realization.

Those who adopted the UDHR did not imagine it to be a legally binding document but its legal impact is wider. Internationally, it has been accepted as an essential legal code. Dozens of legally binding international treaties are based on the principles set forth in the UDHR, and the document has been cited as justification for numerous United Nations actions, including acts of the Security Council. Originally intended as a 'common standard of achievement for all peoples and all nations, over the past sixty years the Universal Declaration has become a cornerstone of customary international law, and all governments are now bound to apply its principles.

The Declaration was not intended to be legally binding and therefore it did not impose any legal obligations on the States to give effect to its provisions. From a legal point of view, it was only a recommendation and was not strictly binding on the States. It has legal value inasmuch as it contains an authoritative interpretation of the provisions of the Charter. The General Assembly has declared (Resolution 2625 (XXV), dated 24 October, 1970) that the Charter precepts embodied in the Declaration constitutes basic principles of international law.

The UDHR is a primary proclamation of the international community's commitment to human rights as a common standard of achievement for all peoples and for all nations. It has been the source of inspiration and has been the basis for the UN in making advances in a standard setting as contained in a number of international human rights treaties. It has inspired a number of declarations and international conventions concluded under the auspices of the UN and of the specialized agencies. It has been a fundamental source of inspiration for all national and international efforts to promote and protect human rights and fundamental freedoms. It has provided a fountain upon which the human rights treaties rest. The Declaration as a whole or its different Articles have been frequently quoted in the resolutions of the General Assembly as justification for action taken by the United Nations.

Its provisions have also influenced various national constitutions, national legislations, regulations and policies that protect fundamental human rights. These domestic manifestations include direct reference to the UDHR or incorporation of its

provisions. The Declaration is frequently cited in support of judicial decisions which upheld a particular right guaranteed under domestic constitutions or statutes.

### UDHR as a Customary International Law

At the time of adoption of UDHR, it was agreed that it would not impose any legal obligation on the member States. The Declaration has been invoked so many times both within and outside the UN and because of general acceptance and common legal opinion, it has been asserted that whatever the intention of its authors may have been, some of the provisions have grown into customary law of nations, and therefore are binding on all States. If the UDHR is regarded to have acquired the status of customary rules it would imply that the subject covered by it, at least in principle, shall be governed by international law and is thus outside the domestic jurisdiction of the concerned states.

The view that the UDHR has acquired the character of customary rule of international law is difficult to accept in view of insufficient State practice. However, it may be said that some provisions of UDHR do reflect customary international law, e.g., Articles 1, 2 and 7 expressing right to equality, Article 4 consisting provision against slavery, Article 5 consisting provision against torture, Article 9 consisting provision against arbitrary arrest and detention.

The UDHR is deficient in three aspects, Firstly, it is not binding on States as law but rather a UN recommendation to States, Secondly, some of its provisions are as general as that of Article 55 of the UN Charter. Thirdly, the Declaration offered no means of implementation other than State goodwill.

### India and UDHR

India is a signatory to the UDHR. The UDHR came into existence in the year 1948 and the Constitution of India came into existence in the year 1950. The different provisions of UDHR constituting various human rights and the fundamental rights enshrined under Part III of the Constitution of India are similar.

The Indian Constitution is widely held to have provided the model for the latter's human rights guarantees. The Apex Court of India in many cases has viewed that the UDHR is not a legally binding instrument, but the founders of the Indian Constitution have shown their foresight about the provisions of UDHR by incorporating Part III consisting of fundamental rights. For example, in cases like the *Kesvanand Bharti* v. *State of Kerala* and, *Chariman, Railway Board and others* v. *Mrs. Chandrima Das,* the SC has observed that the UDHR has a moral code of conduct that has been adopted by the General Assembly of the UN. The applicability of the UDHR and principles thereof may have to be read, if need be, into domestic jurisprudence.

**Check Your Progress**

10. After the UN Charter came into force, what was the most important task in front of the United Nations?
11. What is the objective of UDHR?
12. List the three limitations of UDHR.

## 1.6 CONSTITUTIONAL PROVISIONS FOR EDUCATION

Education being an important social activity, its meaning has been changing through the ages due to change in social and physical conditions. Different thinkers have interpreted it differently. We will try to conceptualize this term with the help of ideas of Indian and western thinkers.





Education may be defined as a purposive, conscious or unconscious, psychological, sociological, scientific and philosophical process, which brings about the development of the individual to the fullest extent and also the maximum development of society in such a way that both enjoy maximum happiness and prosperity. In short, education is the development of individual according to his/her needs and demands of society, of which he/she is an integral part.

The above remarks of different educators highlight the following special features of education:

- Education is both unilateral and bi-polar in nature.
- It is a continuous process.
- It is knowledge or experience.
- It is development of particular aspects of human personality or a harmonious integrated growth.
- It is conducive for the good of the individual or the welfare of the society.
- It is a liberal discipline or a vocational course.
- It is stabilizer of social order, conservator of culture, an instrument of change and social reconstruction.

The Constitution of India is the fundamental law of the country, reflecting the underlying and unifying values of society. It spells out the basic rights of each person; it serves as a framework for all other laws and policies, and cannot be easily changed. However, it can be changed and updated through a democratic process, and it is important to keep it alive, by popularising and using it, and by campaigning for its reform or amendment if necessary. The Preamble to the Constitution of India outlines the social philosophy which should govern all the institutions, including education.

The aim of education is not only to run the administration of the country, but also to develop different aspects of national life. Education is one of the fundamentals of the Constitution, and it is to run in accordance will the Articles of the Constitution.

Constitution gives a broader concept in accordance with which young generation is to be educated. In the Constitution of India, emphasis is laid for the development of ethics in people in accordance to the principles enshrined in the Constitution.

The Constitution of India gives a few directions and suggestions for the development of education in the country which is called the constitutional provisions.

The following provisions, as laid down by the Eighty-Sixth Amendment Act of 2002, have a great bearing on the functioning of Indian education system:

- *Art. 21A.* The State shall provide free and compulsory education to all children of the age of six to fourteen years in such manner as the State may, by law, determine
- *Art. 41.* Right to work, to education and to public assistance in certain cases.

  The State shall, within the limits of its economic capacity and development, make effective provision for securing the right to work, to education and to public assistance in cases of unemployment, old age, sickness and disablement, and in other cases of undeserved want.

- *Art. 45.* Provision for free and compulsory education for children.
  (1) The State shall endeavour to provide, within a period of ten years from the commencement of this Constitution, for free and compulsory education for all children until they complete the age of fourteen years.
  (2) The State shall endeavour to provide early childhood care and education for all children until they complete the age of six years.
- *Art. 46.* Promotion of educational and economic interests of Scheduled Castes, Scheduled Tribes and other weaker sections.

  The State shall promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, and shall protect them from social injustice and all forms of exploitation.
- *Art. 51A (k):* '...who is a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years'. (Eighty-Sixth Amendment Act, 2002).

**Minorities**

- *Art. 29.* Protection of interests of minorities.
  (1) Any section of the citizens residing in the territory of India or any part thereof having a distinct language, script or culture of its own shall have the right to conserve the same.
  (2) No citizen shall be denied admission into any educational institution maintained by the State or receiving aid out of State funds on grounds only of religion, race, caste, language or any of them.
- *Art. 30.* Right of minorities to establish and administer educational institutions.
  (1) All minorities, whether based on religion or language, shall have the right to establish and administer educational institutions of their choice.
  (1A): In making any law providing for the compulsory acquisition of any property of an educational institution established and administered by a minority, referred to in clause (1), the State shall ensure that the amount fixed by or determined under such law for the acquisition of such property is such as would not restrict or abrogate the right guaranteed under that clause.
  (2) The State shall not, in granting aid to educational institutions, discriminate against any educational institution on the ground that it is under the management of a minority, whether based on religion or language.
- *Art. 350A.* Facilities for instruction in mother-tongue at primary stage.

  It shall be the endeavour of every State and of every local authority within the State to provide adequate facilities for instruction in the mother-tongue at the primary stage of education to children belonging to linguistic minority groups; and the President may issue such directions to any State as he considers necessary or proper for securing the provision of such facilities.
- *Art. 15 (5).* Nothing in this article or in sub-clause (g) of clause (1) of article 19 shall prevent the State from making any special provision, by law, for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes or the Scheduled Tribes in so far as such special provisions relate to their admission to educational institutions including private educational institutions, whether aided or unaided by the State, other than the minority educational institutions referred to in clause (1) of Article 30. (Ninety-Third Amendment Act, 2005).





**Equality**

- *Art. 14.* Equality before law.

The State shall not deny to any person equality before the law or the equal protection of the laws within the territory of India.

- *Art. 15.* Prohibition of discrimination on grounds of religion, race, caste, sex or place of birth.
  (1) The State shall not discriminate against any citizen on grounds only of religion, race, caste, sex, place of birth or any of them.
  (2) No citizen shall, on grounds only of religion, race, caste, sex, place of birth or any of them, be subject to any disability, liability, restriction or condition with regard to:
    (a) access to shops, public restaurants, hotels and places of public entertainment; or
    (b) the use of wells, tanks, bathing ghats, roads and places of public resort maintained wholly or partly out of State funds or dedicated to the use of the general public.
  (3) Nothing in this article shall prevent the State from making any special provision for women and children.
  (4) Nothing in this article or in clause (2) of Article 29 shall prevent the State from making any special provision for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes.
- *Art. 17.* Abolition of Untouchability.

'Untouchability' is abolished and its practice in any form is forbidden. The enforcement of any disability arising out of 'Untouchability' shall be an offence punishable in accordance with law.

- *Art. 24.* Prohibition of employment of children in factories, etc.

No child below the age of fourteen years shall be employed to work in any factory or mine or engaged in any other hazardous employment.

**Gender and Vulnerable Groups**

- *Art. 39.* Certain principles of policy to be followed by the State.

The State shall, in particular, direct its policy towards securing: (a) that the citizens, men and women equally, have the right to an adequate means of livelihood;...(e) that the health and strength of workers, men and women, and the tender age of children are not abused and that citizens are not forced by economic necessity to enter avocations unsuited to their age or strength; (f) that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral and material abandonment.

**Religion**

• *Art. 25.* Freedom of conscience and free profession, practice and propagation of religion.

(1) Subject to public order, morality and health and to the other provisions of this Part, all persons are equally entitled to freedom of conscience and the right freely to profess, practise and propagate religion.

(2) Nothing in this article shall affect the operation of any existing law or prevent the State from making any law.

(a) regulating or restricting any economic, financial, political or other secular activity which may be associated with religious practice; and

(b) providing for social welfare and reform or the throwing open of Hindu religious institutions of a public character to all classes and sections of Hindus.

Explanation I—The wearing and carrying of kirpans shall be deemed to be included in the profession of the Sikh religion.

Explanation II—In sub-clause (b) of clause (2), the reference to Hindus shall be construed as including a reference to persons professing the Sikh, Jaina or Buddhist religion, and the reference to Hindu religious institutions shall be construed accordingly.

• *Art. 26.* Freedom to manage religious affairs.

Subject to public order, morality and health, every religious denomination or any section thereof shall have the right to:

(a) establish and maintain institutions for religious and charitable purposes; and

(b) manage its own affairs in matters of religion.

• *Art. 28.* Freedom as to attendance at religious instruction or religious worship in certain educational institutions.

(1) No religious instruction shall be provided in any educational institution wholly maintained out of State funds.

(2) Nothing in clause (1) shall apply to an educational institution which is administered by the State but has been established under any endowment or trust which requires that religious instruction shall be imparted in such institution.

(3) No person attending any educational institution recognised by the State or receiving aid out of State funds shall be required to take part in any religious instruction that may be imparted in such institution or to attend any religious worship that may be conducted in such institution or in any premises attached thereto unless such person or, if such person is a minor, his guardian has given his consent thereto.

**Check Your Progress**

13. Name the Act that ushered drastic change in the education rights for children in India?
14. Article 24 prohibits employment of _____ in factories.

**Activity**

1. Research on the Internet and make a short note on contribution of various countries in drafting of UN Charter.
2. Browse through news articles and research on the Internet and list out the amendments made in the past two decades in the constitutional provisions for education in India.



**Did You Know**

Eleanor Roosevelt supported the adoption of the UDHR as a declaration rather than as a treaty, because she believed that it would have the same kind of influence on global society as the United States Declaration of Independence had within the United States.

## 1.7 SUMMARY

In this unit, you have learnt that:

- The Universal Declaration of Human Rights (UDHR) is a basic international statement of the inalienable and inviolable rights of all members of the human family. It is invoked in a score of national constitutions, has inspired and sometimes become part of many countries national legislation, and has been cited with approval in national courts.
- The concept of human rights is as old as the human civilization. Human right belongs to an individual by virtue of being human. They are a means to human dignity. Human rights are inherent and automatically exercised and are provided to all men everywhere at all times.
- There is a wide range of human rights and all are equally important. The Universal Declaration of Human Rights is the international instrument that contains set of 30 articles. The most common categorization of human rights is as follows: civil and political rights, and economic, social and cultural rights. Civil and political rights are related to the protection of the right to life and personal liberty and allow a person to participate in the State Governance. The right to life, liberty and security of persons, and right to vote are examples of these rights. Economic, social and cultural rights are related to the guarantee of minimum necessities of the life to human beings belong to this category.
- The first generation of human rights comprises civil and political rights, second generation human rights are related to equality and are social, economic and cultural in nature. The Third generations of human rights are collective rights. They have not been enacted in legally binding documents and rights like self determination, economic and social development are included in it.
- Some peculiar characteristics of human right are: Internationalism, Universality, Inheritance, Absoluteness, Inviolability, Permanence, Individuality, Self-Determination, Self-Evidence. These are fundamental for all human beings across the globe.
- There are a variety of sources from where International human rights laws have been derived like religion and natural law. The other sources include International Treaties like United Nations Charter, International customs such as condemning acts of violations like genocide, racism, international declarations, resolutions and recommendations, Judicial Decisions of the various national and international judicial bodies like International Court of Justice and European Court of Human Rights.
- The significance of human rights lies in the fact that they are acknowledged universally. Human dignity is the basis of equality and solidarity between human

beings in society. The principle of respect for human dignity has an ethical and psychological value and is enforced legally by countries if not accorded to the citizens.

- The promotion and encouragement of respect for and observance of human rights and fundamental freedoms is the responsibility of the United Nations. This is done by generating awareness, enacting laws of human rights, monitoring of human rights situation, looking into the individual's complaints, compilation of information on the violations of human rights and coordination of human rights activities indifferent countries.
- The aim of education is not only to run the administration of the country, but also to develop different aspects of national life. Education is one of the fundamentals of the Constitution, and it is to run in accordance will the Articles of the Constitution.

## 1.8 KEY TERMS

- **League of Nations:** It is an international organization formed as a result of the Paris Conference as a precursor of the United Nations.
- **Magna Carta:** It is a document or piece of legislation of English political and civil liberties granted by King John in 1215.
- **Natural law:** It is a law that propounds that human beings have been created by the same creator.
- **Rights:** They are powers which an individual claims from the society on a moral plane and are recognized and enforced by the state through its law.
- **United Nations General Assembly:** It is one of the main decision-making bodies of the United Nations in which all member nations have equal representation.

## 1.9 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Mankind's conscience and reasoning are the foundations of human rights.
2. Civil rights refer to freedom from slavery and servitude, torture and inhuman punishment, arbitrary arrest and imprisonment; freedom of speech, faith, opinion and expression; right to life, security, justice, ownership and assembly.
3. John Locke (1632–1704), popularly called the Father of Classical Liberalism, defined human rights as absolute moral claims or entitlements to life, liberty and property.
4. The second generation of human rights came into existence after World War I. These are associated with equality and were fundamentally economic, social and cultural in nature.
5. Human rights guarantee human dignity and because they were originally given to people who recognized them as natural inherent rights.
6. John Locke in the 17th century was the first to talk of natural rights.



7. The legal bases of rights imply the following three things:
   (i) The State defines and lays down a bill of rights. Rights are not prior to the State but the State is the source of the right
   (ii) The State lays down a legal framework which guarantees the rights. It is the State which enforces the enjoyment of rights
   (iii) As the law creates and sustains rights, so whenever the content of the law changes, the substance of rights also changes.
8. Self-ownership
9. The sources form where international human rights laws have been derived are religion, natural law, international treaties, international customs, judicial decisions, official documentations and other international instruments.
10. After the United Nations Charter came into force, the most important task before the United Nations was the implementation of the principles of the universal respect and observance of human rights and fundamental freedoms for all without distinction as to race, sex, language or religion as laid down under Article 55 of the UN Charter.
11. The objective of UDHR is to promote and safeguard various rights of human beings. The UDHR with various provisions enumerates the basic postulates and principles of human rights in a most comprehensive manner.
12. The UDHR is deficient in three aspects. First, it is not binding on states as law but rather a UN recommendation to States. Second, some of its provisions are as general as that of Article 55 of the UN Charter. Third, the Declaration offered no means of implementation other than state goodwill.
13. The 86th Amendment Act of 2002 was instrumental in bringing in drastic changes in right to education among children.
14. Children

## 1.10 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. Is the UDHR relevant to nations that gained their independence after its adoption?
2. What initiatives were undertaken after adopting the Universal Declaration of Human Rights?
3. What can we do to uphold the principles of the Universal Declaration of Human Rights?
4. What have human rights been categorized?
5. What are the characteristics of human rights.
6. What are the sources of human rights?

### Long-Answer Questions

1. What is the Universal Declaration of Human Rights? Discuss.
2. Are all rights in the Universal Declaration regarded as equally important? Explain.

3. Does the UDHR successfully incorporate different concepts of human rights? Explain.
4. What tools does the United Nations have for protecting human rights? Explain.
5. Describe any three sources of human rights in detail.
6. How does the United Nations promote and protect human rights internationally?
7. Give a detailed account on the constitutional provisions for education in India.

## 1.11 FURTHER READING

Basu, D. D.; *Human Rights in Constitutional Law*, Eastern Book Company, Lucknow, 2008.

Kanan, Satya. P.; *Encyclopedia of Human Rights and Social Justice*, Dominant Publishers and Distributors, New Delhi, 2006.

*The World Conference on Human Rights*, United Nations, Vienna, 14–25 June, 1993.

Jaswal, P.S. and Jaswal, Nishtha; *Human Rights and the Law*, A.P.H. Publishing Corporation, New Delhi, 2010.



# UNIT 2 INTERNATIONAL COVENANTS ON ECONOMIC, SOCIAL AND CULTURAL RIGHTS



**Structure**

2.0 Introduction
2.1 Unit Objectives
2.2 Global Concern for Economic, Social and Cultural Rights
2.3 Convention of Child Rights and Role of International Labour Organization (ILO)
2.4 Convention on Elimination of All Forms of Discrimination against Women
2.5 Gender Equity in Indian Context
2.6 Human Rights and Education
2.7 Summary
2.8 Key Terms
2.9 Answers to 'Check Your Progress'
2.10 Questions and Exercises
2.11 Further Reading

## 2.0 INTRODUCTION

Economic, social and cultural rights guarantee minimum necessities of life to human beings. In the absence of these rights, the existence of human beings is likely to be endangered. Right to adequate food, clothing, housing and good standard of living and freedom from hunger, right to work, right to social security, right to physical and mental health and right to education are included in this category of rights.

These rights are included in the International Covenant on Economic, Social and Cultural Rights. Economic, social and cultural rights are fundamentally based on the concept of social equality. Realization of these rights, which are generally called the 'rights of second generation', have evolved slowly. They are clear only as general principles and not as specific rules.

The United Nations Convention on the Rights of the Child (the popular abbreviations of which are: CRC, CROC, or UNCRC) is a human rights treaty that establishes the civil, political, economic, social, health and cultural rights of children.

Various governing bodies and authorities, under the Indian law, guarantee fundamental human rights to the Indian citizens. It discusses the provisions of the law that confer these rights on us. The unit details the constitutional and legal framework of human rights in India. It also focuses on the role of legislations and judicial protection for human rights in India along with reference to the National Human Rights Commission.

In this unit, we will discuss in detail the convention of rights of child and role of International Labour Organization (ILO). The concept of 'gender equity' and human rights in Indian context has also been discussed in this unit.

## 2.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Interpret the Convention on the Rights of the Child
- Explain the Convention on the Elimination of All Forms of Discrimination against Women
- Describe the Indian agenda at the Beijing Conference of 1995
- Explain the concept of gender equity and human rights in Indian context

## 2.2 GLOBAL CONCERN FOR ECONOMIC, SOCIAL AND CULTURAL RIGHTS

Economic, social and cultural rights are basically socio-economic human rights, like the right to education, the right to housing, and the right to health. These rights are recognized and safeguarded by international and regional human rights instruments. The states that have acquired membership are legally responsible for respecting, protecting and fulfilling economic, social and cultural rights. They are also expected to undertake 'progressive action' to ensure the fulfillment of these rights. Economic, social and cultural rights are also called positive rights as they require active intervention, not abstentions on the part of States. These rights are, therefore, a contrast to the first generation of civil and political rights, with human rights conceived more in positive (right to) than negative (freedom from) terms. In order to acquire these rights, a major commitment of resources is required and, therefore, their realization cannot be immediate as in the case of civil and political rights.

A large number of economic, social and cultural rights are recognized by the Universal Declaration on Human Rights and the primary international legal source of these rights is the International Covenant on Economic, Social and Cultural Rights (ICESCR). The economic, social and cultural rights of women and children, which are recognized by the ICESCR, are protected by the Convention on the Rights of the Child and the Convention on the Elimination of All Forms of Discrimination against Women. The Convention on the Elimination of All Forms of Racial Discrimination forbids discrimination which may be based on racial or ethnic origin in relation to a number of economic, social and cultural rights.

The United Nations General Assembly acknowledged a multilateral treaty called the International Covenant on Economic, Social and Cultural Rights (ICESCR) on 16 December 1966, and it became effective from 3 January 1976. This covenant is engaged in providing economic, social and cultural rights to every individual. It also provides labour rights as well as the right to health, the right to education, and the right to an adequate standard of living. The United Nations committee on Economic, Social and Cultural Rights audits this covenant.

The International Covenant on Economic, Social and Cultural Rights consists of 31 Articles that are divided into five parts. Part I deals with the rights of peoples to self-determination as provided in Article I of the Covenant on Civil and Political Rights.



Other rights of the individuals are enumerated in Part III of the Covenant which include the following rights:

1. Right to work (Article 6)
2. Right to just and favourable conditions of work (Article 7)
3. Right to form and join trade unions (Article 8)
4. Right to social security (Article 9)
5. Right relating to motherhood and childhood, marriage and the family (Article 10)
6. Right to adequate food, clothing, housing and standard of living and freedom from hunger (Article 11)
7. Right to physical and mental health (Article 12)
8. Right to education including a plan for implementing compulsory primary education (Article 13)
9. Right relating to science and culture

Part II of the covenant outlines the responsibilities of the Member States. Article II of the covenant says that each Member State should take necessary steps both individually and collectively through international cooperation and assistance, in order to ensure that the rights of the people are realized. It is the duty of the Member States to ensure complete realization of these rights by appropriate means, predominantly by the adoption of the legislative measures. It appears from the above provision that the States are not under an obligation to abide by the provisions of the Covenant immediately, i.e., from the date of ratification of the Covenant. Therefore, the covenant has provided the standard, which the Member States are required to achieve in future.

Its provisions shall be implemented progressively by the States depending on the resources available to them. Thus, the covenant is basically a convention that specifies and promotes objectives more than the standards and it requires the implementation of these not all at once but over a period of time. The covenants are important because these recognize the significance of the rights of every individual. The appropriate rights and duties of individuals is the foundation of peace, freedom and justice in this world. It is an obligation of the States to provide these rights to the individuals as they are derived from the inherent dignity of a human being; and also because they are essential for the development of one's personality.

## 2.3 CONVENTION OF CHILD RIGHTS AND ROLE OF INTERNATIONAL LABOUR ORGANIZATION (ILO)

According to the United Nations Convention, any human being below 18 years of age falls in the category of a child, except if the age of majority is attained earlier under a state's own domestic legislation.

The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) was adopted in 1979 by the UN General Assembly. Generally it is also referred to as an International Bill of Rights for Women. It comprises a preamble and 30 articles. It defines what constitutes discrimination against women and sets up an agenda for national action to end such discrimination.

The Beijing Declaration and Platform for Action, approved in September 1995 at the Fourth World Conference on Women, is an international pledge to achieve equal opportunity, progress and peace for women all over the world.

> 'We are guilty of many errors and many faults, but our worst crime is abandoning the children, neglecting the fountain of life. Many of the things we need can wait. The child cannot; right now is the time his bones are being formed, his blood is being made and his senses are being developed. To him we cannot answer 'tomorrow'. His name is 'today'. —Nobel Laureate Gabriel Mistral

Children by virtue of their tender age and physical vulnerability require care and protection for their all-round development.

## 1. International standards

The Geneva Declaration on the Rights of the Child, 1924, which was evolved under the aegis of the League of Nations, recognizes that 'mankind owes to the child the best that it has to give'. The Universal Declaration of Human Rights, 1948, asserts that childhood is entitled to special care and assistance. The Declaration on the Rights of the Child, 1959, observes that the child, by reason of his physical and mental immaturity, needs special safeguards and care, including appropriate legal protection, before as well as after birth.

The International Covenant on Civil and Political Rights, 1966, to which India is a state party, seeks to guarantee civil and political rights to all without any distinction. In particular, it provides a child's right to nationality. According to it:

- All children shall be, irrespective of discrimination of race, colour, sex, language, religion, national or social origin, property or birth, be entitled to such measures of protection as are required by his status as a minor, on the part of his family, society and the State.
- All children shall be registered as soon as they are born and shall have a name.
- All children have the right to get a citizenship.

The International Covenant on Economic, Social and Cultural Rights, 1966, to which India is a state party, guarantees a range of rights. In particular, Article 10 seeks to guarantee protection for the family, mothers and children. Article 10(1) of that covenant declares 'that the widest possible protection and assistance should be accorded to the family, which is the natural and fundamental group unit of society, particularly for its establishment and responsibility for caring and educating dependent children.' Article 10(3) further stipulates that:

> '...special measures of protection and assistance should be taken on behalf of all children and young persons without any discrimination for reasons of parentage or other conditions. Children and young persons should not be economically and socially exploited. Their employers, who give work that is harmful to their morals or health or is dangerous to life or likely to hamper their normal development, should be punishable by law. States should also set age limits below which the paid employment of child labour should be prohibited and punishable by law.'

The Committee on Economic, Social and Cultural Rights, which monitors the implementation of that covenant, has dedicated focus on the rights of the child as they are established under Article 10(3). It has paid particular attention to child labour and the state of affairs of children.





*The Convention on the Rights of the Child, 1989 (CRC)* was adopted by the UN General Assembly in 1989, and came into force in 1990. As of now, 191 countries have signed and ratified CRC with the United States of America and Somalia being exceptions. In 54 Articles, CRC covers the right to survival, protection, participation and development. It is the main children's treaty covering their civil, political, as well as economic, social and cultural rights. Its objective is to safeguard children from discrimination, negligence and ill-treatment. It seeks to guarantee their rights in peace as well as war times.

The CRC represents four universal principles to guide implementation of the rights of the child:

- Non-discrimination that ensures equal opportunities, the decision-making by state authorities pertaining to children should primarily focus on the best interests of the child
- The right to life, survival and development that comprises physical, mental, emotional, practical, social and cultural development
- Children should have the freedom to express their views
- Their opinions should be given fair importance considering the age and maturity of the child

Additionally, the CRC also provides for the state parties to agree that children's rights comprise: free and compulsory primary education; protection from economic exploitation, sexual abuse and protection from physical and mental harm and neglect; the right of the disabled child to special treatment and education; protection of children affected by armed conflict; child prostitution; and child pornography.

Under the convention, the Committee on the Rights of the Child was established to monitor the implementation of the convention by the state parties. The Convention on the Rights of the Child 1989 requires that no child will be subjected to torture or other cruel, inhuman or degrading treatment or punishment and that every child deprived of liberty will be treated with humanity and respect for the inherent dignity of the human person.

Article 32 of the Convention on the Rights of the Child requires the state parties to take all possible measures to ensure that the child is safeguarded from being economically exploitated and from performing any work that is likely to be hazardous or to interfere with the child's education, or to be harmful to the child's health or physical, mental, spiritual, moral or social development. India stated that it can only progressively implement the requirements under Article 32(2)(a) on providing for a minimum wage or minimum age for admission to employment by entering the following Declaration to the Convention on the Rights of the Child.

While fully subscribing to the aims and purposes of the Convention, realizing that certain rights of child, specifically those related to the economy and social and cultural rights can only be increasingly put into practice in developing countries, depending on the scope of the resources in hand and in the 'list of things to do' of international cooperation; recognizing that the child needs to be safeguarded from exploitation of every category including economic exploitation; considering the causes that force children of different ages to work in India; having prescribed minimum age for employment in hazardous line of work and other specific domains; having taken administrative measures in terms of duration and conditions of employment; and the

awareness of the impracability of immediate prescription of minimum age for admission to all domains of employment in India—the Government of India attempts to adopt measures to constructively put in to action the provisions of Article 32, especially paragraph 2(a), according to its national legislation and relevant international instruments to which it is a state party. India reiterated this position, while it was reviewed under the Universal Periodic Review mechanism of the Human Rights Council in 2008. The Indian Government maintained that:

> Government of India fully subscribes to the objectives and purposes of the Convention on the Rights of the Child (to which India is a party) as well as the ILO Conventions No. 138 and 182 (which India is yet to ratify). India fully recognizes that the child has to be protected from exploitation of all forms including economic exploitation. Towards this, the Government of India has taken a wide range of measures including prescribing minimum age of 14 years for employment in hazardous occupations, as domestic helps, at eateries as well as in certain other areas. Regulatory provisions regarding hours and conditions of employment have also been made.

Recently, a *National Commission for the Protection of Child's Rights* has been set up for speedy trial of offences against children or of violation of child's rights. The present socio-economic conditions in India do not allow prescription of minimum age for admission to each and every area of employment or to raise the age bar to 18 years, as provided in the ILO Conventions. Government of India remains committed to progressively implement the provisions of Article 32 of the Convention on the Rights of the Child, particularly paragraph 2(a), in accordance with its national legislation and international obligations.

The CRC was supplemented by two optional protocols that were adopted by the United Nations General Assembly in 2000. The optional protocol to the Convention on the Rights of the Child on the Involvement of Children in Armed Conflict was adopted by the UN General Assembly on 25 May 2000 and put into implementation on 12 February 2002. India signed this Optional Protocol on 24 September 2001 and ratified it on 30 November 2000. It seeks to put limits on the use of children in armed conflict as follows:

- It makes it illegal to employ persons below 18 years of age by the non-state actors.
- It makes it obligatory for the States to increase the minimum age of recruitment more than that established by the Convention on the Rights of the Child.
- It makes it obligatory for the States to take all practical steps to keep people below the age of 18 years, from getting directly involved in hostilities.
- It sees that the States come up with secure measures at the time of voluntary employment of individuals who are less than 18 years in age.
- It makes it obligatory for the States to be accountable to the committee on the Rights of the Child, after it is implemented.

India entered a Declaration to Article 3(2) of the Optional Protocol to the Convention on the Rights of the Child on the involvement of Children in Armed Conflict. It declared that:

1. The minimum age for recruitment of prospective recruits into Armed Forces of India (Army, Air Force and Navy) is 16 years. After enrolment and requisite training period, the attested Armed Forces personnel is sent to the operational area only after he attains 18 years of age.
2. The recruitment into the Armed Forces of India is purely voluntary and conducted through open rally system/open competitive examinations. There is no forced or coerced recruitment into the Armed Forces.

The Optional Protocol to the Convention on the Rights of the Child on the Sale of Children, Child Prostitution and Child Pornography entered into force on 18 January 2002. India signed it on 15 November 2004 and ratified it on 16 August 2005. It supplements the provisions of the CRC by providing for, among others, the following:

- The violation in terms of the 'sale of children', 'child prostitution' and 'child pornography'.
- It establishes benchmarks for dealing with breaches, within the domestic law, including with regard to offenders, protection of victims and prevention efforts.
- It also provides a framework for increased international cooperation in these areas, in particular for the prosecution of offenders.

The Government of India has ratified the United Nations Convention on the Suppression of the Traffic in Persons and the Exploitation of the Prostitution of Others 1949 on 25 July 1991.

### International conventions

India is still not a member of the following International Labour Organization (ILO) Conventions:

- Minimum Age Convention, 1973 (No. 138).
- Worst Forms of Child Labour Convention, 1999 (No. 182).

The International Labour Organization (ILO) Convention No. 182 on the Worst Forms of Child Labour, 1999, focuses on ending slavery, debt bondage, forced recruitment of children in armed conflict, prostitution, drug trafficking and any work harmful to the health, safety and morals of children. While India was reviewed under the Universal Periodic Review of the Human Rights Council, Brazil, the Netherlands, and Sweden recommended to India that it consider signing and ratifying the above two Conventions.

### 2. Domestic standards

The Constitution of India, 1950, has a number of provisions which seek to guarantee the rights of children in Part III dealing with Fundamental Rights and Part IV dealing with Directive Principles of State Policy. Article 14 guarantees equality before the law and equal protection of the laws within the territory of Indian Article. Article 15(1) and (2) prohibit bias on the basis of religion, race, caste, sex or place of birth, while Articles 15(3) to (5) enable the State to make special provisions for women and children and for the advancement of any socially and educationally backward classes of citizens or for the Scheduled Castes and the Scheduled Tribes. Right to life and personal liberty is guaranteed under Article 21. Article 21A which has been inserted by the Constitution (Eighty-Sixth Amendment) Act, 2002, is quite significant insofar as rights of children are concerned. It asserts that the State shall provide free and compulsory education to all children of the age of 6–14 years in such manner as the State may, by law, determine.

Articles 23 and 24 under Chapter III of the Constitution deal with right against exploitation and are very significant in the context of the rights of the children. Article 23 renders human beings trafficking and begging as illegal, along with other similar

NOTES

forms of forced labour, while Article 24 prohibits any child less than fourteen years of age to be employed to work in any factory or mine or engage in any other hazardous line of work.

A number of Articles under Chapter IV of the Constitution dealing with the Directive Principles of State Policy are relevant to children. Article 30 outlines certain principles to be followed by the State. It stipulates that the State shall direct its policy toward securing, among other things, '(e) ...the tender age of children are not abused...and not forced by economic necessity to enter avocations unsuited to their age or strength; (f) that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood...protected against exploitation and against moral and material abandonment.'

Article 45 of the Constitution which has been amended by the Constitution (Eighty-Sixth Amendment Act), 2002, provides that the State shall endeavour to provide initial childhood care and education for every child until he reaches the age of six years. Article 46 requires the State to promote with special care the educational and economic interests of the weaker sections of the people, and, in particular, of the Scheduled Castes and the Scheduled Tribes, while Article 47 requires it to raise the level of nutrition and the standard of living of its people and the improvement of public health.

Article 51 A(k) under Chapter IV A dealing with Fundamental Duties requires a parent or guardian to provide opportunities for education to his child or, as the case may be, ward between the age of six and fourteen years. This fundamental duty, which was inserted by the Constitution (Eighty-Sixth Amendment) Act, 2002, is quite significant in the context of right to education of children.

The Child Marriage Restraint Act, 1929, as amended in 1979 and in 2006; the Child Labour (Prohibition and Regulation) Act, 1986; the Infant Milk Substitutes, Feeding Bottles and Infant Foods (Regulation of Production, Supply and Distribution) Act, 1992; Immoral Traffic Prevention Act, 1986; the Pre-Natal Diagnostic Techniques (Regulation and Prevention of Misuse) Act, 1994; the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act, 1996; and Juvenile Justice (Care and Protection of Children) Act, 2000, are some important legislations enacted by Parliament to protect the rights of children. The Commission for Protection of Child Rights Act, 2005, seeks to set up the National Commission for Protection of Child Rights, State Commissions for Protection of Child Rights, and children's courts.

Along with the mentioned listing, other legislations that are also significant in the context of the rights of the children are as follows: Indian Majority Act, 1875; Guardian and Wards Act, 1872; Factories Act, 1954; Hindu Adoption and Maintenance Act, 1956; Probation of Offenders Act, 1958; Bombay Prevention of Begging Act, 1959; Orphanages and Other Charitable Homes (Supervision and Control) Act, 1960; Bonded Labour System (Abolition) Act, 1976; Prevention of Illicit Traffic in Narcotic Drugs and Psychotropic Substances Act, 1987; Right to Information Act, 2005; Delhi Schools Education Act, 1973; and Goa Children's Act.

These legislations are complemented by a number of National Policies which seek to ensure child rights and improvement in their status: National Policy for Children, 1974; National Policy on Education, 1986; National Policy on Child Labour, 1987; National Nutrition Policy, 1993; Report of the Committee on Prostitution, Child Prostitutes and Children of Prostitutes and Plan of Action to Combat Trafficking and



Commercial Sexual Exploitation of Women and Children, 1998; National Health Policy, 2002; National Charter for Children, 2004; and National Plan of Action for Children, 2005.



NOTES

## Prospects and challenges

Despite constitutional safeguards, plethora of legislations and policies, there are many significant gaps in the protection of the rights of the child and in particular, the girl child.

The discrimination against the girl child starts even before birth and manifests itself in the form of selective elimination of female fetuses (sex selection). The female feticide and female infanticide have distorted sex ratio and contributed to what Amartya Sen termed as 'missing millions'. There has been a steady decline in sex ratio over past several decades. If one takes into account juvenile sex ratio (0–6 years) it is much worse. As per 2001 census, there were only 927 girls for every 1000 boys which indeed is a decline from 945 girls for every 1000 boys registered in 1991 census. If one looks into disaggregated data, there are some districts in which the ratio is a little over 650. Sex ratio is the lowest in prosperous states. There appears to be no correlation between economic level and educational level on the one hand and practice of female feticide on the other.

Though Pre-Conception Pre-Natal Diagnostics Act was enacted in 1994, the number of prosecutions launched all over the country till a couple of years back stood at 500. This paltry figure when viewed in the backdrop of a country with over one billion population and that more than a decade and a half existence of PCPNDT Act is indeed shocking. It speaks volumes about the poor enforcement of this legislation.

The discrimination against the girl child also manifests in inadequate access to adequate nutrition, education and health care. UNICEF has compared child malnutrition to a silent emergency. One in every three malnourished children in the world lives in Indian Article Sex-bias in health care accounts for higher female mortality and poor girl child survival. *Infant Mortality Rate* is as high as 57 per 1000 live births. Some of the causes for denial of health care are lack of public health services in remote and interior regions, poor access to healthcare facilities, declining state expenditure on public health, and lack of awareness about preventive child healthcare.

The key indicators of deficit in the development of children in India can be gauged from Table 2.1.

***Table 2.1** Deficit in Development of Children in India*

| Issue | Infant Mortality Rate/1000 (Live Births) | Children under Age 3 with Underweight | Vaccination coverage | Coverage Institutional Deliveries | Drop Out Rates in Class I–X |
|---|---|---|---|---|---|
| | (2005–06) | (2005–06) | (2005–06) | (2005–06) | (2004–05 |
| | 57% | 46% | 44% | 40.70% | 61.92% |

The figures in Table 2.1 speak for themselves and mirror the situation of the rights of the children today. In particular, they depict the gap between law and reality with regard to child's right to life and survival, right to health, food and education.

The Convention on the Rights of the Child, 1989, defines a child as a human being below the age of eighteen years. However, if one carefully reviews various

legislations enacted in India, the age of child differs. Under the Child Labour Prohibition and Regulation Act, 1986, a child is a person who has not completed 14 years of age. As per the Juvenile Justice (Care and Protection of Children) Act, 2000, the age is below 18 years to qualify as a child. A few other legislations put the figure between 14–18. We require uniformity in the definition of a child across legislations in conformity with the CRC.

Following Sarva Shiksha Abhiyan programme, though enrolment levels have registered an increase, levels of retention in schools remain a matter of concern. There is a sharp decline in the enrolment ratio at the upper primary level. There has been a marginal improvement in the percentage of students who stay in school until Class 5 from 61.2 to 62 per cent; but this is way below the global average of 83.3 per cent. It is matter of deep regret that either the girls are not sent to school or their education is discontinued at an early age. Thus, girls form more than half of illiterate children in the age group of 5–9 years.

According to 2001 Census, there were 1,26,66,377 working children in the age group of 5–14 years. However, NGOs put the figure even higher. It is a serious violation of the rights of the child. In the case of MC Mehta *v* State of Tamil Nadu AIR 1997 SC 699, the Supreme Court stressed the importance of educating all children until they complete the age of 14 years and numerous concrete steps for elimination of child labour, including:

- A cross-country survey of child labour to be completed within 6 months.
- The payment of 20,000 rupees by an employer who has broken the law, for each child employed in contravention of the Child Labour (Prohibition and Regulation) Act 1986, into a Child Labour Rehabilitation-cum-Development Fund.
- The State to ensure that an adult member of the family, the child of which has been recruited in a hazardous occupation, is employed anywhere, in place of the child.
- In case a substitute employment is not provided, the parent or guardian of the concerned child would be paid every month the income which would be earned on the corpus, which would be a sum of 25,000 rupees for each child, every month; on discontinuation of the employment of the child, his or her education must be assured in a suitable institution, it being pointed out that the Constitution mandates free and compulsory education for all children until they complete the age of 14 years.

In Bandhua Mukti Morcha vs. Union of India [(1997) 10 SCC 549], the Supreme Court held that employment of children in the carpet weaving industries is a violation of the Constitution of Indian. Compulsory education to children is one of the principal means and primary duties of the State to ensure stability of the democracy, social integration and to eliminate social tensions. Primary education to children, in particular to children from weaker sections, Dalits, tribals and minorities is mandatory. Basic education and employment-oriented vocational education should be imparted.

In addition to child labour, trafficking in women and children, child marriage, sexual exploitation, etc., continue to pose serious challenges to the protection of the rights of the children. The Ministry of Women and Child Development in its publication, *Child Abuse in India 2007*, reported that two out of every three children faced physical abuse in India. The brutal killing of children in Nithari village in Noida, Uttar Pradesh has brought into sharp public focus the issue of missing children as well as their sexual abuse. Child rape, pedophilia and molestation leave a deep and adverse impact physically, mentally and emotionally on the victim.

The above list of challenges is not an exhaustive one. It only serves to highlight that there a number of serious challenges with regard to protection of the rights of children. The children, by virtue of their tender age and physical vulnerability, are at risk. All sections of society have a role in the protection and promotion of the rights of children.

## 2.4 CONVENTION ON ELIMINATION OF ALL FORMS OF DISCRIMINATION AGAINST WOMEN

Since the Nairobi Conference (1985) and the adoption of the Forward Looking Strategies, there have been profound political, economic and social changes in the world, which have affected women negatively and positively. One of the objectives of the international community is complete and equal involvement of women in politics and social, economic and cultural life at all levels from local to the global. The eradication of discrimination on the grounds of sex is another priority objective of the international community.

Although the Cold War has ended wars of aggression, armed conflicts, civil wars and terrorism continue to affect many parts of the world. Violation of women's human rights, including murder, rape, torture, forced pregnancy, and forced abortion continue under ethical cleansing. Peace is, therefore, crucial to the protection for the human rights of women and the girl child.

Military expenditure and arms trade production reduce the resources available for social development. Structural adjustment policies have also had a bad effect on social development and have affected a rise in the number of poor. The conference acknowledges that the women are hindered from achieving complete equality. They are also affected by family status, living conditions, internal displacement, environmental disaster, disease and violence.

The right to freedom of thought, conscience and religion is a universal right. While religion, conscience and belief are important for women and men in fulfilling their moral ethical and spiritual needs it must be acknowledged that extremism affects women badly and leads to violence and discrimination.

NGOs and especially women organizations and feminist groups have become a driving force for change. Women have influenced national, religion and global forms and international forums through NGO's.

Since 1975, equality between women and men has been provided through education and employment and women have entered formally male dominated areas of work and men take responsibility for domestic work and child care.

Even years after the World Conference on Women in Nairobi, women form only 10 per cent of elected legislators worldwide. They are under-represented at national and international administrative structures including the UN.

Women are a very important part of a family which is a critical unit of society. Women's support and input for the betterment of the family and the society must be

**Check Your Progress**

1. What does the Universal Declaration of Human Rights, 1948 assert?
2. What does Article 10 of the International Covenant on Economic, Social and Cultural Rights, 1966 protect?
3. What does Article 32 of the Convention on the Rights of the Child require from the state parties?

recognized and acknowledged. Women's reproductive roles should not become a basis for discrimination.

Although rate of growth of population is to decline in developing countries, 40–50 per cent of the population is less than 15 years of age and the years 2025, 75 per cent of people over 60 per cent would be living in developing countries. Care of the children, sick and elderly is mostly a women responsibility because of the lack of equality and division of labour. Women are isolated and marginalized by many factors in addition to gender. Denied human rights, education, training and employment, they are excluded from decision making contributing as part of the mainstream.

Indigenous women who help to enhance and strengthen their community face discrimination both as women and indigenous people.

The Fourth World Conference on Women took the process forward from 1975, which was proclaimed the International Women's year by the UN General Assembly. A turning point in prioritizing women's issues the UN Decade for women, the adoption of *the Convention on the Elimination of Discrimination against Women (CEDAW)* and the Forward Looking Strategies for the advancement of women indicate important progress in achieving women's equality.

The CEDAW was adopted by the UN General Assembly in December 1979. It was adopted for signature in 1980 and came into force in September 1981 after it had been ratified by 20 member states. Now, 132 out of the total 189 member states have ratified the CEDAW. India was one of the many nations that ratified the convention on the road to Beijing.

The convention is an all-inclusive bill of rights for women, meant to shift women from being beneficiaries to being claimants. It is build on the base of the principle that men and women are equal, thus, extending the scope of human rights discourse and action. It is established on the affirmation that the discrimination of women is a social creation and systematic that discrimination against women is a key issue to be tackled. The Convention begins by defining the term 'discrimination'.

> The term 'discrimination against women' shall mean any discrimination, exclusion or restriction made on the basis of sex which has the effect of nullifying the recognition enjoyment or exercise by women, irrespective of their marital status on a basis of equality of men and women of human rights and fundamental freedom in the political economic, social cultural, civil or any other field.

In order to ensure that there is an opportunity of making those responsible, accountable for the guarantee of these rights, the Convention mandates these rights through the legislative process. In recognition of the damaging impact of social, customary and cultural practice which is based on stereotyped and disparate roles for men and women, the Convention discards the dichotomy between the private and the public, stressing instead that the private is indeed both public and private. It also draws attention together such as civil, political and socio-economic rights for women making a case for the individuality of these rights. The convention differentiates between de facto and de jure rights, it identifies both past and present bias and introduces the concept of corrective measures for remedy of this. Article 4 of the Convention provides steps with the help of which affirmative action and betterment policies for women can be made legal to ensure de facto equal rights for women.

So far, the most important characteristic of the Convention, considering its potential, is that it is a powerful tool in the hands of women. This is the principle of state obligation which is intrinsic to the Convention. The implementation of the





Convention is mandatory for all states parties. As an approach to monitor, it is a requirement for all state parties to submit periodic reports to the Committee on the Elimination of all Forms of Discrimination against Women. The clearest victory was the unchallenged acceptance of the need for equality in decision-making at all levels.

The Convention on the Rights of the Child was also widely used and referenced throughout the document and can be used by activists in follow-up. The UN Committee received alternative reports and conducted investigatory and problem-solving country visits. The Convention can be used in following up on strong references in the platform on child labour, trafficking, sexual abuse, child marriage, genital mutilation and the entire section on girls. Article 5 in the Convention was used to solve a debate on the roles, rights and responsibilities of parents.

The question is what have women gained? In the global arena, women are still trading, bargaining, negotiating, struggling and fighting to claim their rights. They hope that it be more favourable to them. The global community made up a various institutions of power which allots most space of men and ended one more debate that how much to trade off with the women's community. Should they be not freed from reproductive roles that would enhance their productive roles to support the markets in new international world order? If women have gained substantial rights over their sexuality over the last two conferences, are they now freed to be absorbed by a market forcing unsustainable growth consumerism? Is getting out of the frying pan ready to be consumed by fire?

### Beijing Conference, 1995

The Indian Government spent considerable time and resources in repairing the country report for the UN Conference. This report ailed providing sex disaggregated details and compilation of various committees of firm commitments at Beijing. These are as follows:

- Increases investment in education to 6 per cent of GDP with major focus on women and girls.
- Universalize mother and child care programmes to every religion of the country.
- Devise and operate a national policy on women that will provide consistent guidance and information at all levels and in all sectors.
- Establish a Commissioner for women's rights to act as a public defender of women's human rights.
- Standardize a country-level approach to oversee that women rights are implemented.

Admitting that Structural Adjustment Programmes had an adverse effect on the poor, especially women and children, Mr. Madhav Rao Scindia, the then head of the Indian delegation, stressed the need to invest in the social sector and said that 41 per cent of India's budget had been allocated for this particular sector.

An amendment was introduced the first day of the conference at the insistence of India which affirmed the rights of all women to control all aspects of their life, including their own fertility.

Women and child development department Secretary Sarala Gopalan said that India had decided to fix its priorities on issues of poverty eradication, human rights violence and terrorism, as these were important issues in the context of Beijing Conference.

The country, however, could contribute substantially to the drafting of the 38 paragraph Beijing Declaration. India is being the co-chair of the drafting committee along with Canada. Joint secretary S.K. Guha who has also involved with the prolonged preparations of the conferences felt the exercise not to be very smooth with several countries voicing opposition to some terms. One of them was USA which constantly dug its heel on the issue of resources.

The Indian delegation, both government and NGO, was active right through the UN Conference. A team, about 45 women members of Parliament was also present, but only a few of them played an active role in the proceedings. However, there was a general feeling, even among the members themselves, that they had been inadequately briefed and prepared for participation in the conference. The Indian delegation had the largest ever number of women from the villages, slums, tribal areas and hitherto marginalized areas like the North East.

## 2.5 GENDER EQUITY IN INDIAN CONTEXT

Gender equality is one of the most widely used terms nowadays. As we all know, inequality refers to lack of equality, where individuals in a society do not have equal social status. Gender equity assures that male and females should be treated equally in each aspect of life except in case where different treatment is required because of sound biological base. Gender equity consist of two different terms i.e., gender and equity. For a clear understanding of this term, we should first try to understand these two terms. First we will discuss the term 'gender'.

Let us try to understand these two concepts one by one.

### Gender

Gender is the result of socially constructed ideas about how the behaviour, actions, and roles a particular sex performs. The beliefs, values and attitude taken up and exhibited by them is as per the agreeable norms of the society and the personal opinions of the person is not taken into the primary consideration of assignment of gender and imposition of gender roles as per the assigned gender. Intersections and crossing of the prescribed boundaries have no place in the arena of the social construct of the term 'gender'.

The term 'gender' may easily be differentiated from the term sex because it involves all the social attributes that are concerned with that particular sex. These attributes are the resultant of the process of socialization. Gender determines the boundaries of different roles of male and females. It is answer to the question that what is expected, what is allowed and what is valued in a man or women. Can we discover a society in the world where we can observe no difference of role, responsibility, authority over material and non-material things between man and women? It is nearly impossible task. These roles and responsibilities are not similar for each and every society. In other words, you can state that these are context specific, time specific and flexible. In other words, we can state that gender is part of the broader socio-cultural context.

**Check Your Progress**

4. How does military expenditure affect social development?
5. How was Article 5 of the Convention on the Rights of the Child used?
6. Who led the Indian delegation to the Fourth World Women Conference, Beijing, 1995?

### Equity

The term 'equity' has different meaning for different disciplines and different scholars. It refers to the equal rights, responsibilities and opportunities of a human being.





Now we have to understand the meaning of gender equity. Here, the term 'equity' comes as suffix to the term gender. Together it refers to equality in roles, rights, responsibilities and opportunities without any gender biasness. In other words, we can state that there is no differentiation between men and women or boys or girls at any front. It does not mean that women and men will become the same but that women's and men's rights, responsibilities and opportunities will not depend on whether they are born male or female. Gender equality implies that the interests, needs and priorities of both women and men are taken into consideration, recognizing the diversity of different groups of women and men. Gender equality is not a women's issue but should concern and fully engage men and women. Equality between women and men is seen both as a human rights issue and as a precondition for, and indicator of, sustainable people-centred development.

We can conclude therefore that gender equity refers to full equality of women and men in every aspect of life i.e., economic, civil, political, social and cultural rights where no one can deny their rights or deprive them because of their gender.

### Gender Equity Issues in India

When we talk about India, the problem of discrimination on the basis of gender is very common. There are many orthodox communities exist where severe level of gender discrimination is observed. In majority of cases, women are treated as secondary and neglected partner at household and workplace because of traditional norms and beliefs. It has a negative impact on the women's educational, financial, political and personal status.

In traditional Indian societies, early marriage of women is one of the major problem. Mostly they become mothers at early age and it has an adverse effect on their health and status. They are burdened by stringent domestic and financial responsibilities. This kind of discrimination with women starts with their birth. They are frequently malnourished since women typically are the last member of a household to eat and the last to receive medical attention. If you compare the literacy rate of women and men, the situation is very disappointing. The situation is more problematic in rural areas where they receive little schooling, and suffer from unfair and biased inheritance. Traditional rules, regulations and social laws hinders the growth of women and prevent women from accumulating substantial financial assets, making it difficult for women to establish their own security and autonomy.

### Gender Equity and Education

The Constitution of India (1951) not only grants equality to women and forbids any discrimination based on religion, race, caste, sex or place of birth, but also empowers the state to practice protective discrimination in favour of women. Under the protective discrimination clause, the state has passed several social and labour legislations and drawn up special programmes and schemes for the welfare and development of women and children. Additionally, women have reservation in many educational and training institutions, development schemes, local bodies and in certain categories of government jobs.

The ground situation however, is quite the reverse of the above proclaimed position. Sex ratio does not favour women in India and a majority of women go through life in a state of chronic stress, even facing nutritional discrimination within the family. Fewer girls than boys attend school. Even when enrolled, fewer girls manage

to stay in school and complete schooling. Most girls who drop out of school are working in homes and fields of their parental or marital families. Women's work is undervalued and unrecognized and women generally earn a far lower wage than men inspite of doing identical work. Most women do not own property. The growing violence against women inside and outside the family continues to further marginalize women.

The deeply ingrained system of patriarchy describes women's identity and role through her (subordinated) relationship to men. She is, therefore, cast in a clearly defined mould with expected roles / functions, even before she is born.

The National Policy of Education (NPE) 1986 and its Programme of Action (revised in 1992) gives education a mandate to work for women's equality and empowerment. The effort in this document attempts not only to provide equality of educational opportunity, but to transform the entire content and process of education for achieving gender equality and a realignment of gender roles, to make them more equitable and harmonious.

**Shikshakarmi Project:** The Shikshakarmi Project (SKP) was started in 1987 as an innovative educational intervention to address the factors sustaining educational backwardness in Rajasthan. The major objective of the project was to revitalize primary education and expand its outreach to the remote villages in the state, by addressing problems affecting primary education, i.e., teacher absenteeism, low enrollment and high dropout rate, especially that of girls. The programme, therefore, focussed on ensuring universal accessibility and providing context-based education to all children in far-flung areas of Rajasthan. The crucial innovation in the Shikshakarmi Project was identifying local women and men (with some minimum qualifications) called *shikshakarmis* (education workers) who, after systematic training, could teach children in the defunct primary schools and ensure that all children become a part of the educational process. The Shikshakarmi Project document (1986) noted that 'a major problem in the universalization of education is the enrolment of girls'.

**Mahila Samakhya (MS) Programme:** The *Mahila Samakhya (MS)* programme, started in 1989, was initially implemented in Karnataka, Gujarat and Uttar Pradesh. It was initiated to translate the goals of the National Policy on Education into a concrete programme for the education and empowerment of women in rural areas, particularly those from socially and economically marginalized groups. The Mahila Samakhya Programme represents a radical policy departure, as it shifts the focus from delivery design to conditions that make education possible for poor rural women. Under Mahila Samakhya, all forms of educational initiatives establish a definite perspective in terms of curriculum, teaching materials, and pedagogy. For the programme, education in the broad sense means giving importance to women's past knowledge and experiences and providing an alternative place of learning to children who could not attend school. The programme has been very flexible in educating girls and women.

All this has produced results, in as much as many more girls have been able to get an opportunity to access basic education than what could ever have been possible if the Shikshakarmi Project did not exist. But the issue of gender subordination in society, of patriarchal values controlling social relationships and status of women has not been addressed in any real sense. The Mahila Shikshakarmis in most cases continue to see themselves as subordinates to male Shikshakarmis in schools, doing jobs considered 'lower' in hierarchy by the school system, like teaching lower classes etc.



They are seldom considered competent to handle subjects such as Mathematics and Science – generally accepted as male domains. Girls attending the school seldom question their status in the family as a basic issue. Boys too, have yet to enter into a reexamination of their understanding of masculinity.



Given the broad framework of gender equality and a ground situation of patriarchy with all its complexities, it appears that redressal of the problem of gender bias necessitates multiple level interventions that include policy and implementation. Breaking the cycle of female disadvantage entails new forms of realization and mobilization of not merely resources, but communities too. For this, there have to be major attitude shifts in society, facilitated by policy and reinforced by freshly designed development indicators to break out of a culture of patriarchy.

India missed the 2005 deadline of eliminating gender disparity in primary and secondary education. However, the country has hastened progress and the Gender Parity Index (GPI) for Gross Enrolment Ratios (GER) in primary and secondary education has risen. Given current trends, India is moderately or almost nearly on track. However, as the Government of India MDG Report 2009 noted, 'participation of women in employment and decision-making remains far less than that of men, and the disparity is not likely to be eliminated by 2015'. Achieving GPI in tertiary education also remains a challenge. In addition, the labour market openness to women in industry and services has only marginally increased from 13-18 per cent between 1990-91 and 2004-05.

By 2015, India is expected to achieve the *Millennium Development Goals* (MDG) target on gender parity in education; however, the targets on women's economic empowerment and representation in National Parliament will not be met. In shaping the post 2015 development agenda, the attention of the world is focused on India and the role of the Government in promoting gender equality and women's empowerment focused on women's security, voice and empowerment.

## 2.6 HUMAN RIGHTS AND EDUCATION

Human rights are rights inherent to all human beings, whatever our nationality, place of residence, sex, national or ethnic origin, colour, religion, language, or any other status. We are all equally entitled to our human rights without discrimination. These rights are all interrelated, guaranteed by law, in the forms of international law, general principles and other sources of international law.

International human rights law lays down obligations of governments to act in certain ways or to refrain from certain acts, in order to promote and protect human rights and fundamental freedoms of individuals of groups. Human rights are commonly understood as basic fundamental rights that a person cannot be denied by any individual or any government simply because he or she is a human being. They are universal and same for everyone. Human rights entail both right and obligation.

Education has a very important role to play for promotion and protection of human rights. Education makes us aware about our civil and political right often called as the first generation rights and the social, economic and cultural rights as the second generation rights. Without proper education one cannot be introduced with these essential philosophic and there basic rights and obligations. The concept of expanding human rights through education is now popularly present and travelled to

encompass as the third generation rights itself. So, it is very important that we know what is the role of education in promotion and protection of human rights.

Being a tool to spread awareness and information and assimilating, creating and disseminating knowledge amongst its recipients, education can play a crucial role at each of levels for promotion and protection of human rights. But, unfortunately the education system, except for last few years after the establishment of Indian institute of human rights in 1990 which registered Universities for offering such courses in 10 December 1999, has hardly shown any credible in regards of evolvement of human rights and its protection.

A comprehensive education in human rights consists of two components: knowledge and information on human rights and the mechanisms that protect these inalienable rights. It is important that education also impart the skills needed to promote, defend, and apply human rights in daily life. Education about human rights is distinct from other types of values education. For example, citizenship education or education for democratic citizenship (EDC) is a set of practices and activities aimed at making young people and adults better equipped to participate actively in democratic life by assuming and exercising their rights and responsibilities in society.

Beyond the genesis of human rights, wherever they come from, lies a fundamental challenge to their universality, regardless of their origin. With any inception of human rights, one faced with having to acquire acceptance of their authority. There is a problem in that not everyone will share the same motivation or inspiration for human rights. Not everyone will agree that everything asserted as a human right is indeed one.

At a very basic level, the proclamation and acceptance of human rights norms inherently involves majoritarian morality.

Notwithstanding that it has been more than six decades since the concept of spreading and protecting human rights as human right education (HRE) first entered the lexicon of international law, it is readily apparent that HRE has not succeeded in preventing widespread human rights abuses. Wards like Rwanda, Srebrenica and Darfur immediately bring to mind examples of our failure to prevent catastrophic human rights violations. This because of inadequacy of education in the society.

## Role of education in promotion and protection of human rights

Education is a tool for creating the real idea of human rights and making people know its importance in their day to day life. It is also a tool for eliminating the violations of human rights.

Article 51A(1) of Indian Constitution 1950, imposes a duty on all citizens to develop scientific temper, humanism and the spirit of inquiry and reform. The effective discharge of this duty will require human right education (HRE) to give people enhanced awareness and greater openness. Right to Education has also been incorporated.

The Constitution mandates the state to direct its policy towards securing that children are given opportunities and facilities to develop in a healthy manner and in conditions of freedom and dignity and that childhood and youth are protected against exploitation and against moral & material abandonment. HRE of the children as well as the other people is indispensable to the full realization of the responsibility under this constitutional directive. Indian state has an obligation to foster respect for international law and treaty obligations as laid down in Article 51 of the Constitution. India is a signatory to the UDHR and has ratified Civil and Political Rights Convention, Economic, Social and Cultural Rights Convention, and CEDAWCRC.

HRE is inescapable and a legal obligation. Human Rights is not treated as a separate subject in the curricula. NCERT has felt that all contemporary concerns & issues cannot be included in the curriculum as separate subjects of study. It has called upon incorporation of certain emerging concerns including human rights in the course content.

University Grants Commission appointed Sikri Committee in 1980 to consider and report on the different ways and means for promoting HRE in India. The committee suggested inculcating values without marks weight age in schools. At college levels it was felt that all disciplines should include human rights topics, at least, which are directly relevant to their disciplines. But it is disappointing to observe that the NCF 2005 has failed in identifying the content of the HRE in schools.

## Implementation of RTE 2009

A human rights-based approach of education assures every child a quality education that respects and promotes her or his right to dignity and optimum development. The right to education is marked priority on the agenda of the international community since right to education is not only a human right in itself but also is quintessential for the exercise of all other human rights.

A number of human rights treaties accepted and development and social transformation. The right to education flows directly from the right to life. The right to life and the dignity of an individual cannot be assured unless it is accompanied by the right to education. Victims of injustice and violations of human rights will have no faith in justice and values. Right to education and HRE will fall through. The government and the society should be prepared to foot the bill if concrete results are desired.

There is no doubt that education has a major role to play for protection and promotion of human rights. HRE is considered as one of the major tools to stop the violations against human rights. From the above discussion we saw the importance and how education can play a vital role in this regard.

Education should be imparted to each and everyone so that they understand the importance of human rights. Equality shall be the primary consideration in actions concerning children, respect for the views of the child are the general principals of the Convention on the Rights of a child. Education in their own mother language about human rights will make the learners more prompt about their values and ways to use them in their day to day life. The values of cultural diversity and social diversity should be inculcated as a basic teaching. For integration of human rights, the relevant subjects at the primary stage are languages and environmental studies. Stories, poems and songs concerning human rights values will have to be selected. Education should impart gender equality, respect for human dignity and rights.

Human rights concepts of religious freedom and religious tolerance can be inculcated while teaching history topics. Human rights concerns about self determination can be introduced to students while teaching them colonialism and imperialism. While teaching about *sati* and widow remarriage, suppression of women and the need for reverse discrimination can be taught. Democracy equality can enhance

human values in a person. Rule of law and social justice gives immense opportunities to discuss and understand human rights and human duties.

Languages offer many gateways for HRE. Stories, poems, paragraphs can be carefully selected. Themes on French Revolution, Nazism can be used to discuss the evolution of human rights. A discussion on the omnibus violations of human rights during world wars can sensitize the students. Dramatic clubs and literary activities can be utilized effectively. Students can be motivated to write poetry, drama and essays on human rights. Poster making competition, elocution or contests, debates etc. can also be held on similar themes. The school can celebrate the World Human Rights Day, which can go a long way to create wariness among students, parents and the neighborhood community. Initiatives should be taken to enrich the school library and personal collection with books and materials on human rights.

You will learn more about NHRC later in the book.

**Activity**

1. Do a survey in your neighbourhood, and find out how many people in your neighbourhood know about their Fundamental Rights. If most of them do not know about these rights, organize a small workshop where you tell them about these rights.
2. Refer to newspapers, journals and the Internet and create a hierarchy of the composition of the NHRC of India.
3. Prepare a report on the state of children's rights in India. You may use newspapers, magazines and reference books for research.

**Did You Know**

According to the United States Library of Congress, although human rights problems do exist in India, the country is generally not regarded as a human rights concern, unlike other countries in South Asia such as neighbouring Pakistan.

**Check Your Progress**

7. What are first generation rights and second generation rights?
8. What are the components in human rights education?
9. State whether True or False
   (i) Human Rights is treated as a separate subject in the curricula of Indian schools.
   (ii) The Sikri Committee was appointed to report on the different ways and means for promoting HRE in India.

## 2.7 SUMMARY

In this unit, you have learnt that:

- Economic, social and cultural rights are also called positive rights as they require active intervention, not abstentions on the part of States.
- A large number of economic, social and cultural rights are recognized by the Universal Declaration on Human Rights and the primary international legal source of these rights is the International Covenant on Economic, Social and Cultural Rights (ICESCR).
- The United Nations General Assembly acknowledged a multilateral treaty called the International Covenant on Economic, Social and Cultural Rights (ICESCR) on 16 December 1966, and it became effective from 3 January 1976. This covenant is engaged in providing economic, social and cultural rights to every individual. It also provides labour rights as well as the right to health, the right to education, and the right to an adequate standard of living.
- The present socio-economic conditions in India do not allow prescription of minimum age for admission to each and every area of employment or to raise the age bar to 18 years, as provided in the ILO Conventions. Government of India remains committed to progressively implement the provisions of Article 32 of the Convention on the Rights of the Child, particularly paragraph 2 (a), in accordance with its national legislation and international obligations.
- Articles 23 and 24 under Chapter III of the Constitution deal with right against exploitation and are very significant in the context of the rights of the children. Article 23 renders human beings trafficking and begging as illegal, along with other similar forms of forced labour, while Article 24 prohibits any child less than fourteen years of age to be employed to work in any factory or mine or engage in any other hazardous line of work.
- The Convention on the Rights of the Child (CRC), 1989 was adopted by the UN General Assembly in 1989 and came into force in 1990. As of now, 191 countries have signed and ratified CRC with the United States of America and Somalia being exceptions.
- The Convention on the Rights of the Child 1989 prohibits discrimination based on sex.
- The World Conference on Human Rights held in 1993 in Vienna upheld women's rights as human rights and identified many practical actions to protect women's rights.
- CEDAW explains what equality is and ways to achieve it. In so doing, it establishes not only an International Bill of Rights for women, but also an agenda for action by countries to guarantee the enjoyment of those rights.
- The Preamble to CEDAW sets the tone by stating that the role of women in procreation should not be a basis for discrimination.
- International human rights law lays down obligations of governments to act in certain ways or to refrain from certain acts, in order to promote and protect human rights and fundamental freedoms of individuals of groups.
- The concept of expanding human rights through education is now popularly present and travelled to encompass as the third generation rights itself.
- Education about human rights is distinct from other types of values education.
- Education is a tool for creating the real idea of human rights and making people know its importance in their day to day life. It is also a tool for eliminating the violations of human rights.

## 2.8 KEY TERMS

- **Reasonable restriction:** The limitation imposed on a person in the enjoyment of his right which should not be arbitrary or of an excessive nature beyond what is required in the interest of public.
- **Cultural rights:** These are rights related to art and culture, both understood in a large sense.
- **Sex ratio:** It is the number of males for each female in a population.

## 2.9 ANSWERS TO 'CHECK YOUR PROGRESS'

1. The Universal Declaration of Human Rights, 1948 asserts that childhood is entitled to special care and assistance.
2. Article 10 of the International Covenant on Economic, Social and Cultural Rights, 1966, seeks to guarantee protection for the family, mothers and children.
3. Article 32 of the Convention on the Rights of the Child requires the states parties to take all possible measures to ensure that the child is safeguarded from economic exploitation and is not forced to take up unsafe work or the child's education is not hindered, or the child's health is not in danger either physically, mentally, spiritually, morally or socially.
4. Military expenditure and arms trade production reduce the resources available for social development.
5. Article 5 in the Convention was used to solve a debate on the roles, rights and responsibilities of parents.
6. Mr. Madhav Rao Scindia led the Indian delegation to the Fourth World Women Conference in Beijing (1995).
7. Our civil and political right are often called the first generation rights and the social, economic and cultural rights as the second generation rights.
8. A comprehensive education in human rights consists of two components—knowledge and information on human rights and the mechanisms that protect these inalienable rights.
9. (i) False; (ii) True

## 2.10 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. What does the International Covenant on Civil and Political Rights, 1966, say about a child's right to nationality?
2. What are the four general principles embodied by the CRC for guiding the implementation of the rights of the child?
3. What are the Rights of the Child according to international conventions?
4. What does Article 51 A(k) under Chapter IV A, dealing with Fundamental Duties, require a parent to do?
5. What are the key indicators of deficit in the development of children in India?
6. Write a note on education of human rights.

### Long-Answer Questions

1. Explain the rights of a child, according to international standards.
2. Explain the rights of a child, according to domestic standards.
3. Interpret the prospects and challenges in the protection of the rights of the child, and in particular, the girl child.
4. Discuss the significance of CEDAW (Convention on the Elimination of all Forms of Discrimination against Women), as a basic UN document on women's rights.
5. Give a detailed account on the concept of 'gender equity' in Indian context.
6. What is the global concern for socio-economic and cultural rights?
7. What has been the progress on human rights education in India?

## 2.11 FURTHER READING

Gonsalves, Lisa; *Women and Human Rights*, APH Publishing, New Delhi, 2001.

Rai, Rahul; *Human Rights: UN Initiatives*. Authors' Press, 2000.

Shabbir, M. *Human Rights in the 21st Century: Challenges Ahead*, Rawat Publications, New Delhi, 2008.

Symonides, Janusz; *Human Rights: Concept and Standards*, Ashgate Publications, Farnham, UK, 2000.

Symonides, Janusz; *Human Rights: International Protection, Monitoring, Enforcement*, Ashgate Publications, Farnham, UK, 2003.

*Fifty Years of the Declaration of Human Rights*, Amnesty International Declaration Secretariat, London, 1997.

**Reference**

http://orissa.gov.in/e-magazine/Orissareview/2012/sep/engpdf/27-31.pdf

# UNIT 3 EDUCATION IN HUMAN RIGHTS AND DUTIES: INDIAN CONTEXT

**Structure**

3.0 Introduction
3.1 Unit Objectives
3.2 Human Rights Protection Act
- 3.2.1 Protection of Human Rights Act, 1993
- 3.2.2 Role of National Human Rights Commission (NHRC) and State Human Rights Commission (SHRC)
- 3.2.3 Functions of the Commission
- 3.2.4 Role of the United Nations (UN)
- 3.2.5 Role of the United Nations Educational, Scientific and Cultural Organization (UNESCO)
- 3.2.6 Role of National Commission for Women (NCW)
- 3.2.7 Role of United Nations Children's Fund (UNICEF)

3.3 Policy Perspectives of Human Rights Education
3.4 Human Rights and Duties: Core Elements in National Curriculum Framework
3.5 Meaning, Objectives and Methods of Human Rights Education
3.6 Summary
3.7 Key Terms
3.8 Answers to 'Check Your Progress'
3.9 Questions and Exercises
3.10 Further Reading

## 3.0 INTRODUCTION

Irrespective of their nationality, native place, gender, race or origin, religion, cast, colour, language or any other status human beings posses human rights. Human rights are not isolated they are actually related to each other, dependent to each other and perhaps indivisible.

In this unit, we will try to understand the factors that led universal declaration of Human Rights in 1948 and the enactment of the Protection of Human Rights Act in 1993. The unit will also examine the roles played by the NHRC and other rights commissions in the country. Finally, the unit will discuss the need to introduce human rights in school curriculum.

When we talk about human rights, we are talking about every human being on earth. Law bears the responsibility to guarantee of protecting and promoting human rights of an individual. Universal human rights are expressed in terms of different general principles, treaties and customary and other sources of international law. There are many international laws of human rights and these laws lay down obligation to different government to assure the promotion and protection of human rights as well as fundamental freedom of different groups and individuals. The nature of human rights can easily be understood by analysing different characteristics of human rights.

## 3.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Discuss the Protection of Human Rights Act and the role of NHRC, SHRC, UN, UNESCO, NCW and UNICEF
- Identify the key policy perspectives in human rights education
- Describe the human rights and duties and core elements in the national curricular framework
- Explain the meaning, objectives and methods of human rights education

## 3.2 HUMAN RIGHTS PROTECTION ACT

Before learning more about the Act, let us first try to understand the concept of human rights.

### Universal and inalienable

It is a proven fact that human rights are universal. Principally, it was accepted after the Universal Declaration on Human Rights in the year 1948. After this declaration, different international human rights conventions, resolutions and declarations came into the picture with a similar orientation. This is evident from the World Conference on Human Rights held in Vienna in the year 1993. As per the resolution of this conference, it is the duty of states to promote and protect all human rights and fundamental freedoms, regardless of their political, economic and cultural systems.

Generally, all the countries of world have developed a consensus for human rights and roughly 80 per cent of them are trying to exercise one or more of the core human rights treaties. This indicates consent of these countries to acceptance of universalities for human rights. Generally, most fundamental rights are protected by customary international law beyond the geographical and political boundaries.

Human rights are an integral part of life. We cannot deny one's human rights except in extremely adverse situations, e.g., if a court of law found a person guilty of some crime or guilty of violating law, the liberty of that person may be restricted.

### Interdependent and indivisible

The nature of all human rights is interrelated and indivisible. Any right that may be civil or political, right of equality before the law, freedom of expression, cultural, social and economic rights, right to education, social security and education are indivisible and interdependent. There are many collective rights, for example, right to self-determination and right to development. They are also interrelated to each other, dependent on each other and indivisible. If we improve or promote any of these rights it will positively affect the other rights similarly. If a person is deprived of or denied any right, it will adversely affect the other human rights.

### Equal and non-discriminatory

Every human right is fundamentally equal. Internationally, human right laws follow basic principle of non-discrimination. This is the guiding principle for each and every human right treaty. All the conventions of human rights are guided by the central idea of non-discrimination. This can easily be understood by taking the example of International Convention on the Elimination of All Forms of Racial Discrimination and the Convention on the Elimination of All Forms of Discrimination against Women.

Any kind of discrimination is not acceptable for exercising any human right. This principle is of universal acceptance and guides all the rights to be implemented with any discrimination on the basis of a list of non-exhaustive categories such as sex, race, colour and so on. Two principles namely principle of equality and principle of non-discrimination are complementary to each other. It is evident from Article 1 of the Universal Declaration of Human Rights: 'All human beings are born free and equal in dignity and rights.'

### Both Rights and Obligations

Human rights are rights as well as obligations. Administrations of different countries protect, respect and fulfil human rights under international laws by assuming it to be an obligation and duty. There is obligation to protect; which means that the state must protect the human being and group of individuals against any violation of their human rights or any human right abuse. The obligation to respect means that the state must respect human rights of the individual. The obligation to fulfil means that the state will foster the exercise of fundamental human rights by its citizens. As a human being we should respect the human rights of other individuals as well.

### Human Rights Protection

The concern for human rights received a boost after the Second World War when most of the world started advocating social and legal protection of these rights. Establishment of the United Nations provided a sound base to develop a comprehensive system of human rights protection through developing different international laws. These are manifested through different conventions, treaties, organizations and political bodies that are based on international laws of human rights.

Before beginning an analysis of the Universal Declaration of 1948, it should be made clear that the Declaration, together with other human rights instruments, forms a part of what is known as the International Bill of Human Rights. In using the expression 'International Bill of Human Rights', which is not a technical name from an international legal point of view, we are recognizing three international documents of particular importance: the Universal Declaration of 1948, and the two International Covenants on human rights of 1966, which completed the regulations of the Declaration, making up the basic international code of human rights.

UDHR or Universal Declaration of Human Rights was meant to set a standard of rights for all people everywhere, male or female, black or white, communist or capitalist, victor or vanquished, rich or poor, for members of a majority or a minority in the community. In the words of the first paragraph of Preamble to the UDHR, it was to reflect 'recognition of the inherent dignity and .. equal and inalienable rights of all members of the human family ... and through that recognition provide 'the foundation of freedom, justice and peace in the world'.

Article 1 reflects the inspirational nature of the project. It was included only after much controversy about whether it was just stating the obvious, or whether it should be included in the preamble rather than the main text. It proclaims in no uncertain terms that:

> All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood.

**NOTES**

The reason for including it in the main text is to state firmly the basis for all human rights, the rationality of human beings and their obligation to deal fairly with everyone else, regardless of race, sex, wealth and so on. And the Article 7 follows up this theme by saying that all are to be equal before the law and they have a right to protection against any form of discrimination.

Articles 3 and 27 are probably the core of the substantive provisions in the Declaration. They give every human being the rights to life, to liberty, to security of the person and to an adequate standard of living. The first three are core civil and political rights, the last an economic and social right. The right to an adequate standard of living is interesting in that it specifies as part of it the right to health and well-being not only of a person but of his or her family, and also the right to necessary food, clothing, housing and medical care, and the right to social security.

Overarching all the particular rights are Articles 28 and 29. (There are thirty Articles in the Declaration, of which 20 could be regarded as relating to civil and political rights and eight as economic and social rights). Articles 28 and 29 have not received much discussion, and have not been given legally binding force in the two covenants. But they are explosive in their significance. Article 28 emphasizes the responsibility of the whole international community for seeking and putting into place arrangements of both civil and political and an economic and social kinds that allow for the full realization of human rights. It would be easy to ask questions about current arrangements or plans that hardly seem to do this, such as those relating to trade and investment arrangements and perhaps some of those planning to eradicate international crimes such as genocide and war crimes.

Article 30 is also of high importance because it underlines the responsibility all people have to their communities. Notice that the Article does not talk about the state. There is danger in claiming, as so many dictators and even democratic leaders have claimed that people owe duties of an inalienable kind to the state. They do not. But they do have obligations to their fellow human beings, as Article 1 also emphasizes.

Perhaps, looking back at the UDHR after half a century, the only significant lack is in the area of the environment. It can, however, be implied from rights such as the right to life and to an adequate standard of living.

Tribute should be paid to three different groups. Firstly, to Eleanor Roosevelt and her advisors, mainly from the US Department of State that somehow, she was able to maintain a generally harmonious atmosphere during virtually the entire long meeting phase. Secondly, to the many prominent people who provided drafts to the Committee for its consideration. These included noted international lawyer, Professor Hersch Lauterpacht of the Cambridge University, and British author H.G. Wells. There was also a draft based on work done in preparation for an American Declaration of the Rights and Duties of Man. Finally, there was the enormous work done by the secretariat, led by Professor J.P. Humphrey, which brought all this material together for the Commission to consider.

The draft then went to the Economic and Social Council, which did not change the text, but arranged for it to go to the Third Committee of the UN General Assembly, where it faced some obstacles. It was fortunate that the Committee's chairman at the time was Charles Malik. After no less than eighty-one long meetings, at which at least 168 amending resolutions were considered, the Committee, on 6 December 1948, at last reached an agreement – just in time to be taken by the General Assembly before it concluded its meeting for the year.



On the evening of 10 December 1948, the General Assembly endorsed the text of the UDHR without amendment, only two days before it rose until the next year. There were no dissenting votes, but the six communist countries, then members of the UN, and also Saudi Arabia and South Africa, abstained. The Assembly, in a rare gesture of appreciation, gave Mrs. Roosevelt a standing ovation.



**NOTES**

### Growing Stature of the Universal Declaration of Human Rights

So, just ahead of the advent of the Cold War and the consequent slowing down of many constructive developments, the Universal Declaration managed to emerge successfully from the complex and politically hazardous processes of the United Nations to become its human rights flagship. The Declaration had not managed at that time to achieve full recognition from the communist and certain Middle Eastern countries, but at least they had not voted against it.

Notwithstanding the initial difficulties and resistance, the Declaration has probably achieved a stature in the world that even the most optimistic of its founders in 1948 would not have expected.

First, it has become accepted (often rather reluctantly, it is true) as an influential statement of standards, even by countries that are doubtful about the whole human rights enterprise. When even countries like Burma, Argentina, China and the former Yugoslavia stand up to defend UDHR if there is an allegation of a breach, then UDHR can be said to have achieved an important political and moral status.

Second and equally important, the UDHR has become almost an extension of the UN Charter. Although the Charter has only a few Articles that refer to human rights and fundamental freedoms, it is now usual to refer to the UDHR as setting out the content of those rights and freedoms. So, it has become a part of the fabric of the UN itself, and is often referred to in the resolutions of the UN General Assembly, and in its debates, for example in relation to the Declaration on the Granting of Independence to Colonial Countries and Peoples of 1960. At the human rights conference in Tehran in 1978, to mark the 30th anniversary of the UDHR, the representatives of 84 nations unanimously declared that the UDHR states a common understanding of the inalienable rights of all people, and constitutes an obligation for the members of the international community.

Third, most, if not all, the provisions of the UDHR have almost certainly become a part of international customary law. The view is steadily growing among international lawyers that international law includes not only acts such as observing rules about navigation at sea but also acts such as voting for resolutions at the United Nations and other international gatherings. The very large and increasing number of ratifications of the two human rights covenants, and the fact that the rights stated in the UDHR are commonly recognized as well founded in moral and good practice terms, means that there are now virtually unchallengeable grounds for asserting that the UDHR rights have become a part of the international customary law. This means that, unlike treaties, which only bind a country once it has accepted the treaty obligations, all countries in the world are bound, whatever their particular view may be. A country cannot repudiate international customary law, as it may a treaty obligation.

For these three reasons, those who boldly moved to form and then approved the provisions of the UDHR have left an abiding legacy for humankind that will rank with the great religious contributions of past centuries. The UDHR is an increasingly powerful instrument for the achievement of human dignity and peace for all.

NOTES

The rights proclaimed in the Universal Declaration of Human Rights may be classified into the following four categories:

(a) General (Articles 1 and 2)

(b) Civil and Political Rights (Articles 3 to 21)

(c) Economic, Social and Cultural Rights (Articles 22 to 27)

(d) Concluding (Articles 28 to 30)

On 10 December 1948, the General Assembly of the United Nations adopted and proclaimed the Universal Declaration of Human Rights. Following this historic act, the Assembly called upon all member countries to publicize the text of the UDHR and 'to cause it to be disseminated, displayed, read and expounded principally in schools and other educational institutions, without distinction based on the political status of countries or territories.'

### Preamble of Universal Declaration of Human Rights

In the Preamble to the Universal Declaration, there is a call to draw attention to the terrible crimes against human rights committed throughout the Second World War, which are some of the most important factors which led the winners of the war to take up a serious and decided commitment to human rights. This commitment was such that, as you will see in the Annexure, several statements appear in the Charter of the United Nations Organization, which reaffirm the faith in fundamental rights which the people of the United Nations have. It is the second paragraph of Preamble of the Declaration that tells us that 'disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind.' It is certainly true that, from now on, the international community is fully conscious of the fact that if it wishes to present such events to take place in the history of the human race, it should immerse itself in the promotion, encouragement and effective protection of the human rights of all people.

In less than half a century, the Universal Declaration of Human Rights (UDHR) has come to be regarded as possibly the single most important document created in the twentieth century and as the accepted world standard for human rights. The UDHR draws life-preserving messages from the past, and is seen as an essential foundation for building a world in which all human beings can, in the centuries to come, look forward to living in dignity and peace.

It speaks of inherent dignity and of the equal and inalienable rights of all members of the human family as the foundation of freedom, justice and peace in the world. Member states pledge to achieve in co-operation with UN the promotion of universal respect for and the observance of human rights and fundamental freedoms. The relevant part of the Preamble says:

- Whereas recognition of the inherent dignity and of the equal and inalienable rights of all members of the human family is the foundation of freedom, justice and peace in the world,
- Whereas disregard and contempt for human rights have resulted in barbarous acts which have outraged the conscience of mankind, and the advent of a world in which human beings shall enjoy freedom of speech and belief and freedom from fear and want has been proclaimed as the highest aspiration of the common people,
- Whereas it is essential, if man is not to be compelled to have recourse, as a last resort, to rebellion against tyranny and oppression, that human rights should be protected by the rule of law,





NOTES

- Whereas it is essential to promote the development of friendly relations between nations,
- Whereas the peoples of the United Nations have in the Charter reaffirmed their faith in fundamental human rights, in the dignity and worth of the human person and in the equal rights of men and women and have determined to promote social progress and better standards of life in larger freedom,
- Whereas Member States have pledged themselves to achieve, in co-operation with the United Nations, the promotion of universal respect for and observance of human rights and fundamental freedoms,
- Whereas a common understanding of these rights and freedoms is of the greatest importance for the full realization of this pledge,
- Now, Therefore the general assembly proclaims this UDHR as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms and by progressive measures, national and international, to secure their universal and effective recognition and observance, both among the peoples of member states themselves and among the peoples of territories under their jurisdiction.

Indian Parliament enacted the Protection of Human Rights Act in 1993 which provides for the constitution of a National Human Rights Commission (discussed ahead in detail), State Human Rights Commissions in States (discussed ahead in detail) and Human Rights Courts for better protection of human rights in the country.

## 3.2.1 Protection of Human Rights Act, 1993

The United Nations Educational Scientific and Cultural Organization (UNESCO) mooted the idea of the creation of an impartial institution for the protection of human rights in the states as early as 1946.

In pursuance of the resolution of the General Assembly adopted in 1966, the Economic and Social Council requested the Human Rights Commission of the United Nations to consider the question of creating a National Commission of Human Rights to perform certain functions related to the observance of the International Covenants on Human Rights. The question was taken up by the Commission in 1970 and it recommended that the question of establishment of National Commission of Human Rights in each member state of the United Nations ought to be decided by each government of the member state keeping in view the traditions and institutions of each country.

The Commission, in 1978, again emphasized the need for the creation of a national institution. But all these attempts, however, were fruitless. Realizing the importance of such an institution or commission, the World Conference on Human Rights in 1993 urged state governments to strengthen national structures, and institutions of society, which play a role in promoting and safeguarding human rights. The Vienna Declaration and Programme of Action adopted by the World Conference prompted a number of states to establish such institutions.

### Background

The Western countries, America in particular, criticized India on the violation of human rights by Indian armed forces and para-military forces, especially, in the state of Jammu

and Kashmir. In the early 1990's India felt the need for establishing a commission as a positive response to the criticisms of the foreign governments in the context of political unrest and violence in Punjab, Jammu and Kashmir, the North-East and Andhra Pradesh.

Though it is now a well-recognized fact that terrorism is a serious violation of human rights, America, never missed the opportunity to criticize India, whenever Indian security forces sought to deal sternly with extremists and ultras. America claims to be the champion of human rights all over the world. America's practices of human rights are discriminatory. They use human rights as an instrument to harass and even coerce other states. At the same time, America criticizes India and China for alleged violations of human rights. America has adopted a liberal and biased attitude regarding human rights violations in Pakistan, even though Pakistan's record in upholding human rights is not only unsatisfactory but also deplorable. America also pressurizes international financial institutions, which grant loans, not to give or grant loans or financial aid to such states.

In addition to the pressure from foreign countries, there was a strong demand from the domestic front as well for the creation of a National Human Rights Commission. All these led the government to enact a law to establish a Human Rights Commission.

The government's proposal to establish the Commission was of course sudden and without due deliberations. The President of India on September 27, 1993, promulgated an ordinance for the creation of a National Human Rights Commission.

Justice Ranganath Mishra, the former Chief Justice of India, was appointed the Chairperson of the Commission on October 12, 1993.

### Protection of Human Rights Act, 1993 (Act 10, 1994)

The Human Rights Commission Bill introduced in the Lok Sabha on May 14, 1992, was referred to the Standing Committee on Home Affairs of Parliament. The President of India promulgated an Ordinance, which established a National Commission on Human Rights on September 27, 1993, owing to pressure from foreign countries as well as from the domestic front. Thereafter, a Bill on Human Rights was passed in the Lok Sabha on December 18, 1993, to replace the ordinance promulgated by the President.

The Bill became an Act, having received the assent of the President, or January 8, 1994, (Act 10 of 1994) and was published in the Gazette of India, Extraordinary Part II, Section I, on January 10, 1994. Thus, the Protection of Human Rights Act (No. 10 of 1994) came into force.

Article 1 (3) provided that the Act should be deemed to have come into force on the 28th day of September 1993.

Section 1 (2) states that the Act is extended to the whole of India and that it shall apply to the State of Jammu and Kashmir only, in so far as it pertains to, the matters related to any of the entries enumerated in List I or List III in the Seventh Schedule of the Constitution applicable to that state. The purpose of the enactment is laid down in the Preamble of the Act i.e., it provides for the establishment of a National Human Rights Commission, State Human Rights Commissions in States and Human Rights Courts for better protection of human rights.

### 3.2.2 Role of National Human Rights Commission (NHRC) and State Human Rights Commission (SHRC)

The National Human Rights Commission came into existence on 12th October, 1993. The State Human Rights Commissions have also been set up in eighteen States. Several





National Commissions have also been created for women, minorities, scheduled castes, and scheduled tribes, whose chairpersons are deemed members of the National Human Rights Commission. A few years back, the Union Government also set up the National Commission for the Protection of Children's Rights and National Commission for Denotified Tribes. Many states have also constituted State Commissions for Scheduled Castes, Scheduled Tribes, women and minorities.

The NHRC consists of:

- A chairperson who has been a chief justice of the supreme court.
- One member who is, or has been, a judge of the supreme court.
- One member who is, or has been, the chief justice of a high court.
- Two members to be appointed from amongst persons having knowledge of, or practical experience in, matters relating to human rights/

The chairpersons of the National Commissions for Minorities, Scheduled Castes, Scheduled Tribes and Women are deemed to be members of the commission for certain functions specified under the Act. The status and conditions of service of Chairperson of NHRC is the same as that of the chief justice of india, and of members of the commission are those of judges of the supreme court. Thus, the independence of the NHRC is expected to be the same as that of the supreme court of Indian Article. This factor alone gives the NHRC a high status and adds strength to its recommendations. The chairperson and members are appointed on the recommendations of a high level committee, which is politically balanced, being headed by the Prime Minister of India, with Speaker of Lok Sabha, deputy chairman, Rajya Sabha and the Leaders of Opposition of either House of Parliament as members of this committee. The Commission has its own independent investigation wing headed by an officer of the rank of the director general of police, which is answerable to the Commission alone.

The functions of the Commission include, among others:

- Inquire into complaints of violation of human rights by a public servant.
- Intervene in any proceeding involving violation of human rights pending before a court.
- Visit jails and other similar institutions and to make recommendations for the improvement of living conditions of the inmates.
- Review of laws and international treaties.
- Research in the field of human rights.
- Spread human rights literacy and promote awareness.
- Encourage the efforts of NGOs.

The functions of SHRCs are same as that of NHRC except that they have a role with relation to entries in List II and III of the Seventh Schedule of the Constitution dealing with State List and Concurrent List. On the other hand, NHRC has jurisdiction over all entries in the Union, State and Concurrent Lists. In particular, it is significant to note that SHRCs have no jurisdiction over violations committed by the personnel of armed forces, which is the sole responsibility of the National Human Rights Commission.

NHRC is a recommendatory body but ninety-five per cent of its recommendations are generally accepted. Section 18(b) of PHRA, 93 provides that NHRC may approach the Supreme Court or the High Court concerned for such directions, orders or writs as that Court may deem necessary. Section 20 of the Act provides that Government shall table annual reports and special reports of NHRC along with action taken report and reasons for non-acceptance of recommendations.

Insofar as violations by personnel of armed forces are concerned, there is a limited procedure laid down in Section 19 of the Protection of Human Rights Act, 1993. In such cases, the Commission may, either on its own motion or on receipt of a petition, seek a report from the Central Government. After receipt, the commission may either not proceed or make its recommendations to that Government. The Central Government shall inform action taken within three months.

The NHRC can receive complaints through a letter, telegram, fax, email or one can visit the NHRC website and lodge a complaint online. The complaint can be in English, Hindi or other Indian languages. In the first six months of its existence, between October 93 to March 94, NHRC received about 496 complaints which grew steadily. The Commission receives about 100,000 complaints every year now.

The Parliament has recently passed The Protection of Human Rights (Amendment) Act, 2006. The main amendments carried out in the Protection of Human Rights Act, 1993 relate to:

- Strengthening the investigative machinery available with Human Rights Commissions;
- Empowering the Commission to recommend award of compensation, etc., even during the course of enquiry;
- Empowering the NHRC to undertake visits to jails even without intimation to the State Governments; and
- Strengthening the procedure for recording of evidence of witnesses.

In pursuance of its statutory responsibility to review laws, the Commission reviewed over thirty laws and made recommendations. They include, among others, the following:

The Terrorists and Disruptive Activities (Prevention) Act, 1985 (TADA); The Prevention of Terrorism Bill, 2000; The Prevention of Terrorism Ordinance, 2001 (POTO); Freedom of Information Act; Domestic Violence Bill; The Child Marriage Restraint Act; National Rural Employment Guarantee Bill, 2004; Food Safety and Standard Bill, 2005 and Bill on issues related to trafficking.

The National Human Rights Commission took a number of important initiatives with regard to access to Health Services, quality assurance in mental health, HIV/ AIDS, food security, atrocities against the SCs, and trafficking, systemic reforms in police establishment of Human Rights cells in police headquarters, visits to prisons, mental hospitals and government. run homes. In addition, NHRC also recommended that human rights education be incorporated in formal education system. As a result, subject of human rights has been introduced in curricula of educational institutions.

Certificates, post-graduate, diploma and degree courses in human rights have been introduced in over twenty universities. Human rights sensitization and training is being provided to civil servants, personnel of army and paramilitary forces, judicial officers and prison officials. Some important achievements of the NHRC include interventions and significant results obtained in Gujarat riots; Punjab mass cremations case; Odisha starvation deaths. It took a bold stand on caste discrimination at the World Conference against racism in Durban. It also intervened with success in Odisha super cyclone, Gujarat and J&K earthquakes and tsunami disasters.

The NHRC issued guidelines on a wide range of subjects, including custodial deaths, fake encounters, arrests and rights of prisoners. The NHRC's role is that of a facilitator to facilitate the efforts of the central government, state governments and other public authorities in ensuring good and humane governance, by making appropriate recommendations from time to time. In this regard, it acts as a catalyst. It has been monitoring the elimination of child labour, bonded labour, trafficking in women and children, manual scavenging, public health, quality assurance in mental hospitals etc.

The NHRC's role is complementary to that of judiciary. The Supreme Court has referred to the NHRC the monitoring of the elimination of bonded labour, functioning of three mental hospitals, and issue of Punjab mass cremations, Orissa starvation deaths and the lifting of the ban on salt iodization.

The NHRC also has an international role. It is a member of the International Coordinating Committee of National Institutions at the UN, Asia Pacific Forum of NHRIs and the Commonwealth Forum of National Human Rights Institutions. The Commission has extended technical assistance to Bangladesh, Nepal, Sri Lanka, South Korea and a number of other countries in the setting up of their Human Rights Commissions. It works in close co-ordination with the office of the the UN High Commissioner for Human Rights and other specialized institutions of the UN and has been playing a role in Human Rights Council. It also played a key role in the drafting of the UN Convention on Disability.

### 3.2.3 Functions of the Commission

The Commission shall perform all or any of the following functions, namely:

(a) Inquire, suo motu or on a petition presented to it by victim or any person on his behalf or on a direction or order of any court into complaint of
   (i) Violation of human rights or abetment thereof; or
   (ii) Negligence in the prevention of such violation, by a public servant

(b) Intervene in any proceeding involving any allegation of violation of human rights pending before a court with the approval of such court;

(c) Visit, not withstanding anything contained in any other law for the time being in force, any jail or other institution under the control of the State Government, where persons are detained or lodged for purposes of treatment, reformation or protection, for the study of the living conditions of the inmates there of and make recommendations thereon to the Government;

(d) Review the safeguards provided by or under the Constitution or any law for the time being in force for the protection of human rights and recommend measures for their effective implementation;

(e) Review the factors, including acts of terrorism that inhibit the enjoyment of human rights and recommend appropriate remedial measures;

(f) Study the treaties and other international instruments on human rights and make recommendations for their effective implementation;

(g) Undertake and promote research in the field of human rights;

(h) Spread human rights literacy among various sections of society and promote awareness of the safeguards available for the protection of these rights through publications, the media, seminars and other available means;

(i) Encourage the efforts of non-governmental organizations and Institutions working in the field of human rights; such other functions as it may consider necessary for the protection of human rights.

### 3.2.4 Role of the United Nations (UN)

The system of human rights protection at international level is developed on the basis of different provisions of the United Nations Charter. The preamble of the charter provides that the members 'reaffirm faith in fundamental human rights, in the equal rights of men and women' and Article 1(3) of the United Nations charter states that one of the purposes of the UN is: 'to achieve international cooperation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion'. As stated in Article 55 of the UN Charter, the United Nations shall promote:

(a) Higher standards of living, full employment, and conditions of economic and social progress and development

(b) Solutions of international economic, social, health and related problems

(c) International cultural and educational cooperation

(d) Universal respect for, and observance of, human rights and fundamental freedom for all, without distinction as to race, sex, language, or religion

### 3.2.5 Role of the United Nations Educational, Scientific and Cultural Organization (UNESCO)

UNESCO is an agency of the United Nations established in 1945 to promote the exchange of information, ideas and culture. UNESCO directs its efforts towards making circumstances favourable for exchange of views and ideas among different civilizations, cultures and peoples. It works to develop respect between values that are commonly shared among people. These talks and discussions help people all across the globe to achieve international perception of progressive growth. These visions comprise adherence to human rights, mutual respect and the alleviation of poverty. All these are the highlights of UNESCO's and mission and activities.

The wide-ranging goals and concrete objectives of the worldwide community—as established in the globally decided development goals, including the Millennium Development Goals (MDGs) – underpin all UNESCO's strategies and activities. Thus UNESCO's exclusive capabilities in education, technology, culture and communication and information play a part in the realization of these goals.

UNESCO's mission is to work to build peace, to eradicate poverty, encourage ongoing development and dialogues between different cultures with the help of education, science, cultural activities, communication and information. The organization has two significant global priorities:

- Africa
- Gender equality

In addition to other overarching objectives:

- Equal opportunities of value education and constant learning for everyone
- Organizing scientific knowledge and policy for consistent development
- Focusing on rising social and ethical problems
- Nurturing diverse cultures, exchange of ideas between different cultures and promoting a culture of peace
- Building integrated knowledge associations on the basis of information and communication



Importantly, human rights education has been at the heart of UNESCO's work since the organization was founded in the aftermath of the Second World War.

In 1947, the organization created a committee on the theoretical bases of human rights which included leading intellectuals, philosophers and political scientists. A questionnaire was sent out to politicians and scholars, such as Mohandas Gandhi or Aldous Huxley, soliciting their opinion on the idea of a Universal Declaration of Human Rights.

Based on their responses, a report was prepared, showing that despite cultural differences, member states of the United Nations shared two great principles and common ideals—the right to live a life free of the haunting fears of poverty and insecurity.

The results of these actions facilitated the adoption of the Universal Declaration of Human Rights on 10 December 1948 in Paris. On the next day, UNESCO proclaimed by a special resolution the importance of this declaration for all activities of the Organization and undertook to make it known as widely as possible.

Then, as now, a quality education was considered one that, among other outcomes, addresses the ignorance and mistrust that lead to human conflict. This can only be achieved through learning that is relevant, pedagogically sound and based on meaningful participation.

UNESCO's work on human rights education is framed by the Recommendation concerning Education for International Understanding, Cooperation and Peace and Education Relating to Human Rights and Fundamental Freedoms, which was adopted by the General Conference in 1974, as well as by major international instruments such as the Universal Declaration of Human Rights.

Building on this normative framework, UNESCO contributes to the implementation of the World Programme for Human Rights Education (WPHRE), which began in 2004 as a follow-up to the United Nations Decade for Human Rights Education (1995–2004). The organization supports its member states to design and execute inclusive policies on human rights education through advocacy, targeted actions and the exchange of information.

Human rights education is an integral part of the right to education and is increasingly gaining recognition as a human right in itself. Knowledge of rights and freedoms is considered a fundamental tool to guarantee respect for the rights of all. UNESCO's work in human rights education is guided by the World Programme for Human Rights Education.

The Office of the High Commissioner for Human Rights (OHCHR) works with governments, legislatures, courts, national institutions, civil society, regional and international organizations, and the United Nations system, including UNESCO, to develop and strengthen capacity, particularly at the national level, for the protection of human rights in accordance with international norms.

The primary human rights treaty bodies UNESCO interacts with, are:

(i) The Committee on Economic Social and Cultural rights (CESCR)

(ii) Committee on the Elimination of Discrimination Against Women (CEDAW)

(iii) Committee on the Rights of the Child (CRC)

(iv) Committee on Migrant Workers (CMW)

### 3.2.6 Role of National Commission for Women (NCW)

In India, there are many national commissions that are working in the area of human rights protection. For the protection and promotion of interests of women, the apex national organization is National Commission for Women (NCW). NCW works with the

objective to give women a platform to raise their voice in case of any violation of any of their rights. It also represents the rights of women in India. The different socio-economic problems faced by women are subjects of the NCW campaigns. The objective of the NCW is to represent the rights of women in India and to provide a voice for their issues and concerns. The major problems faced by Indian women are traditional dowry system and unequal representation of women in political and religious areas. NCW rose different such issues related to equal representation for women in jobs, exploitation of women for labour, police abuses against women. In rural and traditional society Indian women face many types of problem and these problems are solved by the NCW through multi-pronged strategy as follows:

- Generation of legal awareness among women, thus equipping them with the knowledge of their legal rights and with a capacity to use these rights.
- Assisting women in redressal of their grievances through pre-litigation services.
- Facilitating speedy delivery of justice to women by organizing Parivarik Mahila Lok Adalats in different parts of the country.
- Review of the existing provisions of the Constitution and other laws affecting women and recommending amendments thereto, any lacunae, inadequacies or short comings in such legislation's.
- Organizing promotional activities to mobilize women and get information about their status and recommend paradigm shift in the empowerment of women.
- Investigate and examine all matters relating to the safeguards provided for women under the Constitution and other laws;
- Review, from time to time, the exiting provisions of the Constitution and other laws affecting women;
- take up cases of violation of the provisions of the Constitution and of other laws;
- look into complaints and take suomoto notice of matters;
- solve complaints of deprivation of women's rights;
- special studies or investigations into specific problems or situations arising out of discrimination and atrocities against women;
- undertake promotional and educational research so as to suggest ways of ensuring due representation of women in all spheres and identify factors responsible for impeding their advancement;
- advice on the planning process of socio-economic development of women;
- evaluate the progress of the development of women under the Union and any State;
- inspect or cause to inspected a jail, remand home, women's institution or other place of custody where women are kept as prisoners or otherwise and take up with the concerned authorities for remedial action, if found necessary;
- Fund litigation involving issues affecting a large body of women.

### 3.2.7 Role of United Nations Children's Fund (UNICEF)

The United Nations Children's Fund (UNICEF) is a United Nations Programme that provides long-term humanitarian and developmental assistance to children and mothers in developing countries. It is one of the members of the United Nations Development Group and its Executive Committee. Its name was shortened from the original United Nations International Children's Emergency Fund but it has continued to be known by the popular acronym based on this previous title.

The origin of UNICEF was on December 11, 1946. The United Nations General Assembly was responsible for its origin. In World War II many countries were facing post war related problems. The basic motive of UNICEF was to provide good health care and emergency food to the children of these countries. In the year, 1953 it became an integral part and permanent member of the UN.

There are many rights of children that are defined in the Convention on the Rights of the Child. UNICEF is continuously and effectively working to realize these fundamental and intrinsic rights of children to a basic quality of life. UNICEF plans its activities on the basis of its previous experiences for the sake of providing a good life to children. It conducts substantial researches to help the children to get best start in their lives, train them for quality survival and proper schooling.

The work of UNICEF can be categorized into five main strategic areas. All these areas are related to each other. When one of these areas sees progress, other areas also got positively affected.

The major areas are as follows:

**1. Young Child Survival and Development**

Healthcare of children is of prime concern for UNICEF. UNICEF works to support two important Millennium Goals i.e. 4 and 6 which are concerned with reduction of child mortality and control of malaria. UNICEF works for complete and comprehensive care of children's health from antenatal period before birth to a fully developed child.

UNICEF helps different national and international bodies regarding health and nutrition by supporting them financially and technically. It also supports different intervention programmes for the same cause. Major priority areas of UNICEF related to health and nutrition are immunization of children, prevention and control of malaria, eradication of guinea worm, prevention of anaemia and control and treatment of different diarrhoeal and respiratory diseases. UNICEF is committed to work for survival of young child and works to provide them with a productive future.

Different health programmes organised by the UNICEF are very comprehensive and include care of pregnant women before the birth of child. It continues after the birth of child with neonatal care after first four weeks of birth. It encourages breastfeeding. There are many agencies that provide emergency obstetrics. UNICEF helps these agencies through finance, research support and social mobilization. Since more than the last sixty years UNICEF is committed to provide healthcare to the developing countries. More than half of the children of these countries are vaccinated with technical and financial support from UNICEF. The vaccination campaign helped these children to get protected from different chronic diseases such as polio, diphtheria, tuberculosis and measles. This support also includes supplements of vitamin A and different micronutrients. These programmes helped in boosting the immunity of children and preventing different disorders related to malnutrition.

In the case of emergencies, UNICEF helps in delivering fresh water and basic medical supplies along with the World Health Organization (WHO). It also supports such programmes at local level, that are run in different countries that

NOTES

help provide basic sanitation and fresh water because these are vital things for healthy life.

2. **Basic Education and Gender Equality**

Most priority areas of UNICEF include education and gender equity. It works on the lines of Millennium Goals 2 and 3. UNICEF promotes universal primary education through providing technical and financial support to collaborating countries. It collaborates between different donor countries and the UN agencies to facilitate the process. The concern of UNICEF includes promoting gender equity and education. The process includes enrolment of poor children in school and inclusion of disadvantage and excluded groups in school via community-sponsored childhood education and health initiatives.

Gender inequality is one the major problems in nearly all the developing countries. UNICEF focuses its activities on reducing gender gap and other discrimination in different aspects of society on the basis of sex. It promotes girls' education at the basic level. UNICEF supports schools to develop a hygienic, healthy and child friendly environment that fosters optimum quality learning. UNICEF also helps different international, national and local bodies to enhance educational quality and retention through practical demonstrations and evidence-based advocacy.

Finally, UNICEF also delivers school supplies and tents in emergencies as part of its Back-to-School programme, helping children return to a more normal, safe environment and protecting their right to basic education.

3. **HIV/AIDS and Children**

HIV/AIDS is one of the biggest challenges for mankind. In developing countries the condition is more critical due to poverty and illiteracy. Along with medical challenges that are faced by a HIV positive child, social devastation is also to be considered. UNICEF helps different youth groups, religious organisations and NGOs working in this area by joining hands with corresponding nations. It organises different educational and awareness programmes that train adolescents on different gender sensitive preventions skills.

Through community participation, UNICEF works to help different governments, communities and families in a way that they can support children orphaned by HIV/AIDS. It also supports preventive and awareness programmes for mother-to child transmission of HIV/AIDS.

4. **Child Protection**

The declaration 6 of Millennium Summit Declaration advocates protection of child. UNICEF provides protective environments to help prevent and respond to violence, exploitation, abuse and discrimination, and for children made vulnerable by emergencies.

The major concerns of UNICEF regarding child protection are different awareness campaigns along with promotion of laws to protect children and punish child exploiters. Focus areas include raising government awareness of child protection rights and situation analysis, as well as promoting laws that punish child exploiters.

5. **Policy Analysis, Advocacy and Partnerships for Children's Rights**

Millennium Goal 8 focuses on establishing global development partnerships. UNICEF works to strengthen different policies that protect children's rights to survive and flourish.





NOTES

Reducing child poverty is a critical part of fulfilling these rights. To that end, and to accomplish MDG 1, UNICEF promotes sustained national and global investments that leverage resources and results for children's well being, including in emergency situations. Working with a wide range of partnerships including governments, regional bodies, and private and civil society groups, UNICEF provides input and participates in developing sector-wide approaches (SWAPs), Poverty Reduction Strategy Plans (PRSPs) and budgets. Among others, UNICEF has helped to develop the following two data tools, acknowledged by governments and development agencies worldwide as leading indicators, and is itself the lead agency for monitoring global and country data on the six Millennium Development Goals related to children:

- UNICEF devised The Multiple Indicator Cluster Survey (MICS) method in the mid-1990s. An inexpensive and effective tool, MICS is a major source of data for monitoring the fulfilment of human rights and progress toward the Goals.
- Further, UNICEF promotes the active participation of children and young people in decision-making on matters concerning their own well-being. UNICEF organizes many activities and programmes that advocate children's rights like freedom of expression and thoughts and to share their ideas through the website or different social networking sites.

## 3.3 POLICY PERSPECTIVES OF HUMAN RIGHTS EDUCATION

The basic function of human rights education is to make individuals more aware so that they are able to defend their rights and those of others. Knowledge of human rights constitutes a forceful means of achieving empowerment. Human rights education needs learners and educators working together to translate the language of human rights into knowledge, skills and behaviour. This necessitates developing an understanding of the responsibility each individual has in making those rights a reality at the local, national and international levels: the essence of global citizenship and global responsibility.

The relevant provisions of international instruments define human rights education as constituting training, dissemination and information efforts aimed at building a universal culture of human rights by imparting knowledge and skills and molding attitudes. This entails the strengthening of respect for human rights and fundamental freedoms; the full development of the human personality and a sense of its dignity; the promotion of understanding, tolerance, gender equality and friendship among all nations, indigenous peoples and racial, national, ethnic, religious and linguistic groups; the enabling of all persons to participate effectively in a free society; and the furtherance of the activities of the United Nations for the maintenance of peace.

The United Nations has initiated and encouraged human rights awareness campaigns in order to promote particular human rights issues. The activities carried out during these campaigns include the development of publications, studies and programmes with the involvement of United Nations bodies, States, other international, regional and local organizations and civil society. The campaigns are intended to highlight specific human rights issues. It is widely acknowledged that awareness and information are vital to respect for human rights and prevention of human rights violations.

**Check Your Progress**

1. When did the UDHR come into being? What was the main effect of this declaration?
2. What is the guiding principal for each and every human right treaty?
3. Which are the four categories that the rights proclaimed in the Universal Declaration of Human Rights may be classified into?
4. When did the NHRC come into existence?
5. What are the two significant global priorities of the UNESCO?
6. What are the five main strategic areas that the work of the UNICEF can be categorized into?

### 1. World Public Information Campaign on Human Rights (1988–ongoing)

It was only as recently as 1988 that the first concerted international effort was made to promote human rights. Although efforts had been made in the mid 1950s to enhance awareness of the drafting work on the international covenants, the launching of the World Public Information Campaign on Human Rights by the General Assembly in December 1988 represented the first serious attempt at coordinated effort for developing awareness of international norms. It was launched on the 40th Anniversary of the UDHR and is open-ended: once launched, it became part of the United Nations human rights programme.

The Campaign includes the publication and dissemination of human rights information and reference material, the organization of a fellowship and internship programme, briefings, commemorative events, exhibits and external relations activities.

The programme has expanded significantly since 1988. The use of the OHCHR website is an important new development. It is, *inter alia*, a repository of the United Nations human rights information in English, French and Spanish relating to international treaties, treaty-body databases, programmes and activities, United Nations reports, resolutions and human rights issues.

### 2. Decade for Human Rights Education (1995–2004)

The 1993 Vienna Declaration and Programme of Action concluded that human rights education, training and public information are essential for the promotion and achievement of stable and harmonious relations among communities and for fostering mutual understanding, tolerance and peace. The Conference recommended that States should strive to eradicate illiteracy and direct education towards the full development of the human personality and the strengthening of respect for human rights and fundamental freedoms. It called on all States and institutions to include human rights, humanitarian law, democracy and the rule of law as subjects in the curricula of all learning institutions in formal and non-formal settings.

Pursuant to a suggestion of the World Conference, the UNGA proclaimed the 10-year period beginning on 1 January 1995 the United Nations Decade for Human Rights Education, and welcomed the Plan of Action for the Decade as set out in the report of the Secretary General. The High Commissioner for Human Rights was called upon to coordinate the implementation of the Plan.

#### *Plan of action*

The plan of action has five objectives:

1. Assessment of needs and formulation of effective strategies for the furtherance of human rights education;
2. Building and strengthening of programmes and capacities for human rights education at the international, regional, national and local levels;
3. Coordinated development of effective human rights education materials;
4. Strengthening the role and capacity of the mass media in the furtherance of human rights education;
5. Global dissemination of the Universal Declaration of Human Rights.

The plan focuses on stimulating and supporting national and local activities and embodies the idea of a partnership between governments, international organizations, non-governmental organizations, professional associations, various sectors of civil society and individuals.

In the national context, the Plan provides for the establishment of comprehensive (in terms of outreach), effective (in terms of educational strategies) and sustainable (over the long term) national plans of action for human rights education, with the support of international organizations. Those Plans should constitute an integral part of the national development plan (when applicable) and be complementary to other relevant national plans of action already defined (general human rights plans of action or those relating to women, children, minorities, indigenous peoples, etc.). Specific guidelines have been developed by OHCHR and endorsed by the General Assembly for the development of national plans of action for human rights education.

### 3. Third Decade to Combat Racism and Racial Discrimination

By its resolution 48/91 of 20 December 1993, the General Assembly proclaimed the Third Decade to combat racism and racial discrimination, beginning in 1993, and adopted the programme of action proposed for the Decade. The ultimate goals of the Decade are:

- to promote human rights and fundamental freedoms for all, without distinction any kind on grounds of race, colour, descent or national or ethnic origin, with particular emphasis on eradicating racial prejudice, racism and racial discrimination;
- to arrest any expansion of racist policies, to eliminate the persistence of racist policies and to counteract the emergence of alliances based on the mutual espousal of racism and racial discrimination; and
- to resist any policy and practices which lead to the strengthening of racist regimes and contribute to sustaining racism and racial discrimination.

### Draft of United Nations Declaration on Human Rights Education and Training

#### *The General Assembly*

Reaffirming the purposes and principles of the Charter of the United Nations with regard to the promotion and encouragement of respect for all human rights and fundamental freedoms for all without distinction as to race, sex, language or religion.

Reaffirming also that every individual and every organ of society shall strive by teaching and education to promote respect for human rights and fundamental freedoms.

Reaffirming further that everyone has the right to education, and that education shall be directed to the full development of the human personality and the sense of its dignity, and enable all persons to participate effectively in a free society and promote understanding, tolerance and friendship among all nations and all racial, ethnic or religious groups, and further the activities of the United Nations for the maintenance of peace, security and the promotion of development and human rights.

Reaffirming that states are duty-bound, as stipulated in the Universal Declaration of Human Rights, the International Covenant on Economic, Social and Cultural Rights and in other human rights instruments, to ensure that education is aimed at strengthening respect for human rights and fundamental freedoms.

Acknowledging the fundamental importance of human rights education and training in contributing to the promotion, protection and effective realization of all human rights.

Reaffirming the call of the World Conference on Human Rights, held in Vienna in 1993, on all States and institutions to include human rights, humanitarian law, democracy

and rule of law in the curricula of all learning institutions, and stating that human rights education should include peace, democracy, development and social justice, as set forth in international and regional human rights instruments, in order to achieve common understanding and awareness with a view to strengthening universal commitment to human rights.

Recalling the 2005 World Summit Outcome, 2 in which Heads of State and Government supported the promotion of human rights education and learning at all levels, including through the implementation of the World Programme for Human Rights Education, and encouraged all States to develop initiatives in this regard.

Motivated by the desire to send a strong signal to the international community to strengthen all efforts in human rights education and training through a collective commitment by all stakeholders.

## Declarations

### Article 1

1. Everyone has the right to know, seek and receive information about all human rights and fundamental freedoms and should have access to human rights education and training.
2. Human rights education and training is essential for the promotion of universal respect for and observance of all human rights and fundamental freedoms for all, in accordance with the principles of universality, indivisibility and interdependence of human rights.
3. The effective enjoyment of all human rights, in particular the right to education and access to information, enables access to human rights education and training.

### Article 2

1. Human rights education and training comprises all educational, training, information, awareness-raising and learning activities aimed at promoting universal respect for and observance of all human rights and fundamental freedoms and thus contributing to, *inter alia,* the prevention of human rights violations and abuses by providing persons with knowledge, skills and understanding and developing their attitudes and behaviours, to empower them to contribute to the building and promotion of a universal culture of human rights.
2. Human rights education and training encompasses education:
   (a) About human rights, which includes providing knowledge and understanding of human rights norms and principles, the values that underpin them and the mechanisms for their protection;
   (b) Through human rights, which includes learning and teaching in a way that respects the rights of both educators and learners;
   (c) For human rights, which includes empowering persons to enjoy and exercise their rights and to respect and uphold the rights of others.

### Article 3

1. Human rights education and training is a lifelong process that concerns all ages.
2. Human rights education and training concerns all parts of society, at all levels, including preschool, primary, secondary and higher education, taking into account academic freedom where applicable, and all forms of education, training and learning, whether in a public or private, formal, informal or non-formal setting. It includes, *inter alia,* vocational training, particularly the training of trainers, teachers and State officials, continuing education, popular education, and public information and awareness activities.
3. Human rights education and training should use languages and methods suited to target groups, taking into account their specific needs and conditions.





### Article 4

Human rights education and training should be based on the principles of the Universal Declaration of Human Rights and relevant treaties and instruments, with a view to:

(a) Raising awareness, understanding and acceptance of universal human rights standards and principles, as well as guarantees at the international, regional and national levels for the protection of human rights and fundamental freedoms;

(b) Developing a universal culture of human rights, in which everyone is aware of their own rights and responsibilities in respect of the rights of others, and promoting the development of the individual as a responsible member of a free, peaceful, pluralist and inclusive society;

(c) Pursuing the effective realization of all human rights and promoting tolerance, non-discrimination and equality;

(d) Ensuring equal opportunities for all through access to quality human rights education and training, without any discrimination;

(e) Contributing to the prevention of human rights violations and abuses and to the combating and eradication of all forms of discrimination, racism, stereotyping and incitement to hatred, and the harmful attitudes and prejudices that underlie them.

### Article 5

1. Human rights education and training, whether provided by public or private actors, should be based on the principles of equality, human dignity, inclusion and non-discrimination, particularly equality between girls and boys and between women and men.
2. Human rights education and training should be accessible and available to all persons, and should take into account the particular challenges and barriers faced by, and the needs and expectations of, persons in vulnerable and disadvantaged situations and groups, including persons with disabilities, in order to promote empowerment and human development and to contribute to the elimination of the causes of exclusion or marginalization, as well as enable everyone to exercise all their rights.
3. Human rights education and training should embrace and enrich, as well as draw inspiration from, the diversity of civilizations, religions, cultures and traditions of different countries, as it is reflected in the universality of human rights.
4. Human rights education and training should take into account different economic, social and cultural circumstances while promoting local initiatives in order to encourage ownership of the common goal of the fulfillment of all human rights for all.

### Article 6

1. Human rights education and training should capitalize on and make use of new information and communication technologies, as well as the media, to promote all human rights and fundamental freedoms.

NOTES

2. The arts should be encouraged as a means of training and raising awareness in the field of human rights.

**Article 7**

1. States, and where applicable relevant governmental authorities have the primary responsibility to promote and ensure human rights education and training, developed and implemented in a spirit of participation, inclusion and responsibility.
2. States should create a safe and enabling environment for the engagement of civil society, the private sector and other relevant stakeholders in human rights education and training, in which the human rights and fundamental freedoms of all, including of those engaged in the process, are fully protected.
3. States should take steps, individually and through international assistance and cooperation, to ensure, to the maximum of their available resources, the progressive Implementation of human rights education and training by appropriate means, including the adoption of legislative and administrative measures and policies.
4. States, and where applicable relevant governmental authorities, should ensure adequate training in human rights and, where appropriate, international humanitarian law and international criminal law, of State officials, civil servants, judges, law enforcement officials and military personnel, as well as promote adequate training in human rights for teachers, trainers and other educators and private personnel acting on behalf of the State.

**Article 8**

1. States should develop, or promote the development of, at the appropriate level, strategies and policies and, where appropriate, action plans and programmes to implement human rights education and training, such as through its integration into school and training curricula. In so doing, they should take into account the World Programme for Human Rights Education and specific national and local needs and priorities.
2. The conception, implementation and evaluation of and follow-up to such strategies, action plans, policies and programmes should involve all relevant stakeholders, including the private sector, civil society and national human rights institutions, by promoting, where appropriate, multi-stakeholder initiatives.

**Article 9**

States should promote the establishment, development and strengthening of effective and independent national human rights institutions, in compliance with the Paris Principles, recognizing that national human rights institutions can play an important role, including, where necessary, a coordinating role, in promoting human rights education and training by, *inter alia*, raising awareness and mobilizing relevant public and private actors.

**Article 10**

1. Various actors within society, including, *inter alia*, educational institutions, the media, families, local communities, civil society institutions, including non-governmental organizations, human rights defenders and the private sector have an important role to play in promoting and providing human rights education and training.
2. Civil society institutions, the private sector and other relevant stakeholders are encouraged to ensure adequate human rights education and training for their staff and personnel.





NOTES

**Article 11**

The United Nations and international and regional organizations should provide human rights education and training for their civilian personnel, and military and police personnel serving under their mandates.

**Article 12**

1. International cooperation at all levels should support and reinforce national efforts, including, where applicable, at the local level, to implement human rights education and training.
2. Complementary and coordinated efforts at the international, regional, national and local levels can contribute to more effective implementation of human rights education and training.
3. Voluntary funding for projects and initiatives in the field of human rights education and training should be encouraged.

**Article 13**

1. International and regional human rights mechanisms should, within their respective mandates, take into account human rights education and training in their work.
2. States are encouraged to include, where appropriate, information on the measures that they have adopted in the field of human rights education and training in their reports to relevant human rights mechanisms.

**Article 14**

States should take appropriate measures to ensure the effective implementation of and follow-up to the present Declaration and make the necessary resources available in this regard.

## 3.4 HUMAN RIGHTS AND DUTIES: CORE ELEMENTS IN NATIONAL CURRICULUM FRAMEWORK

The World Conference on Human Rights considers human rights education, training and public information essential for the promotion and achievement of stable and harmonious relations among communities and for fostering mutual understanding, tolerance and peace. States should strive to eradicate illiteracy and should direct education towards the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. The World Conference on Human Rights also called on all states and institutions to include human rights, humanitarian law, democracy and rule of law as subjects in the curricula of all learning institutions in formal and non-formal settings.

Human rights education should include peace, democracy, development and social justice, as set forth in international and regional human rights instruments, in order to achieve common understanding and awareness with a view to strengthening universal commitment to human rights. Taking into account the World Plan of Action on Education for Human Rights and Democracy, adopted in March 1993 by the International Congress on Education for Human Rights and Democracy of the United Nations Educational, Scientific and Cultural Organization, and other human rights instruments, the World Conference on Human Rights recommends that states develop specific programmes

**Check Your Progress**

7. The 1993 _____ _____ and _____ concluded that human rights education, training and public information are essential for the promotion and achievement of stable and harmonious relations among communities.
8. What is the aim of the World Public Information campaign on Human Right?

and strategies for ensuring the widest human rights education and the dissemination of public information, taking particular account of the human rights needs of women.

Pursuant to the Vienna Declaration, the UN declared 1995-2004 as the United Nations Decade for Human Rights Education.

Human rights education is defined as training, dissemination, and information efforts aimed at building a universal culture of human rights by imparting knowledge and skills, and molding attitudes. Human rights education has five dimensions:

- Strengthening respect for the human personality and its dignity;
- Fully developing the human personality and its dignity;
- Promoting understanding, tolerance, gender equality, and friendship among all nations, indigenous peoples, and racial, national, ethnic, religious, and linguistic groups;
- Enabling all persons to participate effectively in a free society; and
- Furthering the activities of the United Nations to maintain peace.

The Constitution assumes responsibility for forming the country's perception of human rights. The Preamble, Fundamental Rights, Fundamental Duties, and Directive Principles of the State Policy signify tangible action taken for the actualization of human rights. The protection of human liberty and freedom is covered in Fundamental Rights and Directive Principles of the State Policy, while fundamental goals have been outlined in the Preamble. The greatest priority has been given to the rights of the child. It is impossible to separate rights from duties, therefore, Fundamental Duties (Article 51) are also vital. These provisions exemplify the combined spirit and desires of all Indians.

The following provisions in Constitution uphold human rights:

- Equality before the law (Article 14)
- Non-discrimination on grounds of religion, race, caste, sex and place of birth (Article 15)
- Equality of opportunity (Article 16)
- Freedom of speech, expression, assembly, association, movement, residence, acquisition, and disposition of property, practice of any profession, carrying out any occupation, trade, or business (Article 19)
- Prohibition of traffic in human beings and forced labor (Article 23)
- Prohibition of labour in case of children below fourteen years (Article 24)
- Freedom of religion (Article 25)
- No provision for religious instruction in any educational institution wholly maintained out of state funds (Article 28)
- Conservation of language, scripts and culture (Article 29 [1])
- Right of minorities to administer educational institutions (Article 30)
- State guarantee of social order (Article 38 [1], Directive Principles of State Policy);
- Adequate means of livelihood, equal pay for equal work for both men and women, non-abuse of health of the worker, opportunity for children to develop in a healthy manner and in conditions of freedom and dignity (Article 39, Directive Principles of State Policy)
- Right to work, education, and public assistance in specific cases (Article 41, Directive Principles of State Policy)
- Provision for free and compulsory education of children up to fourteen years of age (Article 45, Directive Principles of State Policy)
- Ensuring education and economic development of Scheduled Castes, Scheduled Tribes and other weaker sections of society (Article 46, Directive Principles of State Policy).





### Educational Policies and Human Rights

The discussions and summaries of the different Education Commissions and the directives of educational policy have expressed the significance of the right to education and education in human rights as integral to the ongoing efforts towards reforming and developing education in the country. They allot special status to women, Scheduled Castes, Scheduled Tribes, minorities, and the handicapped in the national educational system, and call attention to values education. They also identify the fundamental elements of the main curriculum, which consists of the chief human rights issues.

The National Curriculum Framework is covered in the 1986 National Education Policy. It provides for the core elements that overlap narrow subject margins and is intended to uphold values specific to an Indian citizen's life.

Human rights education is significant as an instrument of raising awareness of human rights. Of the world's school children, about 77 per cent are in primary school, and of these, 68 per cent are girls. It is lamentable that in the early 1990s, more than one quarter of the 95 million school children in developing countries did not reach the fifth grade. Most countries failed to achieve universal access to education by year 2000. Human rights education is not a mere vision. It will become a way of life. It is necessary if non-formal education is to prepare millions of children to be good world citizens. A framework to support non-formal human rights education has to be developed.

### Need for Human Rights Education in the School Curriculum

The largest part of a child's education, right from an early age, takes place through schooling. In the school, the child not only gains bookish knowledge but also picks up the social skills, and other moral and social values that determine his or her perspectives about life in general. The child starts to explore the world outside home and family through the school and also expresses his own self there. Therefore, it is important that the foundation for learning the importance of human rights values and their evolution should be laid in school. It is also important that the child develops a holistic worldview regarding human rights, besides those of his own immediate environment. The representation of human rights should be placed in the context of society's overall moral and social traditions, rather than as an abstract idea. If human rights seem to the child like a distant concept that applies to other people and not himself or herself, then the purpose will be defeated. If looked at carefully, the school is like a microcosm of the society where children from all backgrounds and all cultures come and are treated on an equal basis. There are also the usual politics and power games at play. A school is like the 'concept of citizenship, impersonal and formal. By understanding the idea of school as a community, citizens will learn to understand and feel included in the political nation' (Osler and Starkey 1996).

The school is a 'model of good society' as John Dewey (1909) suggested. A school is a place where a smaller community can be established that would practice social justice and human rights, exactly as they should be practiced in the society at large. The environment in a school should be conducive to democratic expression of

ideas and open communication among teachers and students. One of the goals of a school's education programme should be to build a stronger and healthier relationship with the community it operates in. Human rights must be build in into the very functioning of the entire school—from philosophy and organization to the elements of its teaching curriculum.

The first National Curriculum Framework formulated by the National Council of Educational Research and Training (NCERT) in 1975 states: 'The awakening of social consciousness, the development of democratic values and of a feeling for social injustice and national integration are extremely important....

All subjects should be taught in such a manner so as to foster the spirit of scientific humanism.' The National Curriculum Framework for primary and secondary education (NCERT 1988) identifies and addresses some of these concerns such as promoting values of egalitarianism, democracy, secularism, equality, removal of social barriers and creating a sense of common citizenship. It states that a school's curriculum should address some global concerns and thereby try to make children recognize and be appreciative of the various cultures that exist in other parts of the world.

Emphasizing the need to boost national identity, the National Curriculum Framework for School Education (NCERT 2000) reinforces the ten core components defined in the National Policy on Education (1986):

- The history of India's freedom movement
- Constitutional obligations
- The content essential to nurture national identity
- India's common cultural heritage
- Egalitarianism
- Democracy and secularism
- Equality of the sexes
- Protection of the environment
- Removal of social barriers
- Observance of small-family norms
- Inculcation of scientific temper.

It further highlights the need to include the fundamental duties as laid down in Article 51 A of Part IV A of the Constitution as common core components of the curriculum:

> 'These core components need to be integrated in school curriculum in a suitable manner. It is envisaged that they would help in instilling a nationally shared perception and values and creating an ethos and value system in which a common Indian identity could be strengthened.'

## Curriculum Development

Curriculum development comprises curriculum planning, devising curriculum policy, execution and assessment. Curriculum renewal however, must be an ongoing process because the curriculum must be updated as per the changes in various subjects being taught. Curriculum development should be a systematic and well-planned improvement approach that takes into account the standard foundational principles.



Human rights education should be incorporated into the whole curriculum, and also the hidden curriculum (i.e., the culture of schooling and teacher training institutions and programs) rather than only including it in the formal curriculum as a single subject.

Human rights teaching materials should be produced in different forms. At the base of human rights education is curriculum development for all phases of school education. The curriculum should integrate important ideas from the Vienna Declaration—human rights, humanitarian law, democracy, rule of law, peace, development and social justice. More such values can be added to customize the curriculum to local needs of the learners in the best way to make them cognizant of human rights in their daily lives at different ages. While a few of these topics may already be present in the curriculum, the main challenge now is to bring them to the forefront of the educational programmes.

The blueprint of the curriculum needs to be based on the philosophical, psychological, and sociological fundamentals of curriculum planning and development. The school curriculum should aim to achieve all-round growth of the student.

## Objectives of Human Rights Education

Human rights education aims to do the following:

- Enhance the knowledge and understanding of human rights.
- Foster attitudes of tolerance, respect, solidarity, and responsibility.
- Develop awareness of how human rights can be translated into social and political reality.
- Develop skills for protecting human rights.

## Context and Approaches to Curriculum Organization

The framework of and strategies for including human rights education in the curriculum are the following:

- Direct context: This refers to incorporating specific topics or subjects that are about human rights education into literature, science, or history syllabi, for example. Recently, the Indira Gandhi National Open University (IGNOU) launched a certificate course in human rights education.
- Indirect context: This refers to the use of all school subjects as media for human rights education. A few examples are (i) creating 'learning units in human rights' for the purpose of incorporating the content of various syllabi toward resolving a specific problem, and (ii) integrating human rights components in the syllabus of every subject.
- Implicit context: This refers to developing such a socio-cultural philosophy in schools which will help to inculcate understanding of human rights in students. The challenge here is the introduction of new curriculums at various stages in schools. It is a known fact most curricula are already overloaded with subjects and adding one more would be kind of a violation of human rights.

When one considers integrating human rights education into existing curriculums, the question that arises is 'how much to integrate?' There is no simple answer and a number of issues must be considered. The study of human rights may be included under the subject of ethics and at the secondary level, basic and other rights may be included in the existing foundation courses.

## Content and Core Values

The first question in curriculum building is in what way human rights issues can be structured and elaborated upon at different levels. The curriculum, among other things, stresses the following core values:

- *Issues of human rights and democracy:* (i) dignity; (ii) equality; (iii) justice; (iv) protection of rights; (v) freedom of participation; (vi) freedom of speech and expression; and (vii) freedom of religious belief.
- *Values and attitudes:* (i) human rights and democracy; (ii) cooperation and solidarity; (iii) preservation of culture; (iv) self and others; (v) internationalism; (vi) protection of the environment; and (vii) spirituality.

These values are deemed universally acceptable and desirable in such documents as the Declaration, the Convention on the Rights of the Child, the Convention on the Elimination of Discrimination against Women, etc.

Human rights education is interdisciplinary. The central area may be outlined as follows: (i) education for tolerance; (ii) democracy and national understanding; (iii) protection of human rights; (iv) violation of human rights and democratic freedom; (v) economic rights; (vi) civil rights; (vii) critical thinking; (viii) scientific temper; (ix) intellectual honesty; (x) justice and empathy; (xi) legal awareness; (xii) equality of educational opportunity; (xiii) gender equality; (xiv) political economy and humanism; (xv) minority rights; (xvi) local government and civic rights; (xvii) constitutionalism and legitimacy; (xviii) history and philosophy of human rights; (xix) world citizenship; (xx) role of the UN; (xxi) human rights and national and world histories; (xxii) international understanding; and (xxiii) environmental protection.

Human rights education should focus on attitudes of tolerance, respect, and solidarity, and develop individual awareness of how human rights can be translated into social and political reality.

## Basic approach

The basic approach to human rights education in schools is to integrate it into various subjects and not treat it as a separate area of study. It also requires a multidisciplinary approach. The issue of human rights is inextricably linked with other major curricular issues. *The National Curriculum Framework for School Education* (NCERT 2000) recommends the integration of various curricular concerns:

The curriculum development process is often influenced by a 'panic approach' in which the local, national or international developments with some socio-economic and political bearing influence the decisions concerning the curriculum without prior, careful and structured planning. This 'panic approach' of including new and temporal curricular concerns may often lead to an overloading of the curriculum. At a time when concerns such as 'literacy', 'family system', 'neighborhood education', 'environmental education', 'consumer education', 'tourism education' 'AIDS education', 'human rights education', 'legal literacy', 'peace education', 'population education', 'migration education', 'global Education' and 'safety education' are making a case for separate place in the school curriculum, the best approach would be to integrate these ideas and concepts, after a careful analysis in the existing areas of learning. Appropriate strategies for this integration may be suitably worked out in the detailed subject curricula.



It is vital to examine the learning opportunities available when designing new curriculum or introducing specific changes so as to avoid a disparity between expectation and reality. This should constitute a realistic approach —meaningful, responsive, and result oriented. Human rights is itself an educational conception involving human interaction inside and outside school.



## Human Rights Education and Curriculum

Human rights education is not treated as a separate area of the curriculum but is integrated into various subjects at different stages:

- The Indian political system and Constitution
- Problems and challenges of contemporary life—political, economic, social, cultural, educational—that have direct or indirect bearing on human rights
- Diversity and variety of Indian culture, its composite and non-monolithic character
- The Indian social system and dynamics of social change
- Major events in Indian and world history relating to the struggle for political and civil rights as well as economic and social rights, and the role of the people and outstanding leaders in these struggles
- The world human rights situation with regard to gross violations in the form of colonialism, racism, and apartheid; and
- Literary works that reflect human rights concerns and the quest for freedom and rights

Major historical documents such as the American Declaration of Independence, the French Declaration of the Rights of Man and the Citizen, the UN Charter, and the Universal Declaration of Human Rights should be discussed. It is imperative to discuss the human rights curriculum as a cross-curricular approach at the elementary and secondary levels.

### *Human rights education and the elementary-level curriculum*

The major subject areas relevant to human rights at the lower-primary stage are social studies, environmental studies, and languages.

- Human rights issues are integrated into environmental studies, starting with the child's immediate environment and gradually taking the child to the study of the district, state, country, and the world.
- Narratives and biographies of men and women from the history of India and of the world, India's freedom struggle, and certain aspects of the Indian Constitution should be included in this course.
- The language curriculum should focus on the development of compassion, tolerance, and sympathy, through stories and poems.
- Environmental studies dealing with family, neighborhood, relations, food, clothing, shelter, religious festivals, and national heroes expand the knowledge of and respect for diversity and human equality.
- Children also develop an understanding of independent India as it evolved during the freedom struggle. Learning about the nation's goals and the main features of the Constitution — fundamental rights, directive principles of State policy, and fundamental duties, as well as secularism and democracy — may help promote human rights.

### *Upper-primary stage*

In the upper-primary stage, the major subject areas relevant to human rights education are social studies, science, and languages.

- History courses deal mainly with Indian history and, in general, with the history of world civilization, stressing an understanding and appreciation of India's cultural heritage and composite nature, its richness and variety. They focus on understanding diversity and consideration for other's rights.
- The human rights dimension lies in providing a critical understanding of Indian society through the ages, with focus on the position of women and the inequalities created by the caste system.
- Children should be made aware of legislative reforms and the role of international organizations in uplifting women and children.
- The course in geography helps children develop an appreciation for different ways of living, interdependence, and sharing of common values by diverse cultures. Civics helps promote values of democracy, secularism, socialism, and national integration. It also includes the study of issues relating the environment, arms race, and human rights. Children develop a perspective of these problems in an international context. It is possible to introduce the student to a more comprehensive view of the concept of human rights and the interconnection between the ideals of secularism and democracy.
- The thematic and ideational content in language help to promote awareness of human rights, international understanding, and related issues of global significance. The subject of language similarly lays the foundation for an appreciation of the underlying humanistic values conveyed through folk tales, legends, poems, essays, and dramas.
- Science is an undiversified subject. Stress is on inculcating a national outlook and thereby helping to combat obscurantism and prejudice based on narrow consideration of caste, sex, or religion. The course guidelines also emphasize promoting understanding of the processes and problem areas related to agriculture, health and nutrition, environmental protection, energy, material resources, and, more important, developing a scientific attitude.

### *Human rights education and the secondary curriculum*

Secondary schools offer a much wider and varied range of opportunities to teach human rights and to practice and observe rights and duties.

- A literature course may offer the opportunity to study the rights of children and young people. Literature and language classes can be used to promote cultural exchanges with schools in other countries as well as to promote social relations, peace, freedom, and justice.
- At this stage, 'the global perspective' and 'major concerns' are integrated into the social sciences

**Methodology** As discussed earlier, human rights teaching should permeate not only all school subjects but also every aspect of school life. There is no denying the fact that human rights can be taught more effectively through various co-curricular activities. The methodological issues are relatively more important than the content as far as human rights education is concerned.



## 3.5 MEANING, OBJECTIVES AND METHODS OF HUMAN RIGHTS EDUCATION

Education in Human Rights and Duties: Indian Context

NOTES

Human rights education is the base for dealing with primary causes of abuse of human rights. It is concerned with the prevention of violation of human rights, fighting against discrimination, establishing equal opportunities for all and bringing about more people to participate in the process of decision-making on the lines of democracy.

Human rights education is a fundamental part of the right to education and is progressively being recognized as a human right in itself. Acquaintance with rights and freedom is regarded as a basic means for assurance of respect for the rights of all. UNESCO's efforts directed towards bringing about human rights education are guided by the World Programme for Human Rights Education.

Human values of peace, equality, non-discrimination, justice, non-violence, tolerance and respect for human self-esteem should be an integral part of education. Quality education on the lines of human rights approach implies that the rights are applied to all education systems and in every learning environment.

The United Nations General Assembly has proclaimed it as central to the achievement of the rights enshrined in the Universal Declaration of Human Rights (UDHR) adopted and proclaimed for General assembly 217A (III) of 10 December 1948.

> Now, therefore the general assembly proclaims this universal declaration of human rights as a common standard of achievement for all peoples and all nations, to the end that every individual and every organ of society, keeping this Declaration constantly in mind, shall strive by teaching and education to promote respect for these rights and freedoms...

The UDHR states the role of educators in achieving the social order called for by the declaration:

> Education shall be directed to the full development of the human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.

### Why Human Rights Education?

1. It produces changes in values and attitudes of the individual.
2. It produces changes in conduct and behaviour.
3. It produces empowerment for social justice.
4. It develops attitudes of solidarity across issues and nations.
5. It develops knowledge and analytical skills.
6. It produces participatory education.
7. It develops an outlook for sustenance of life with civil liberties.

Therefore, it is necessary to give human rights education to everyone and save the world.

## Importance of Human Rights Education

Everyone has the right to education. Education shall be directed to the full development of human personality and to the strengthening of respect for human rights and fundamental freedoms. It shall promote understanding, tolerance and friendship among all nations, racial or religious groups, and shall further the activities of the United Nations for the maintenance of peace.

The concept underpinning human rights education is that education should not only aim at forming trained professional workers, but also at contributing to the development of individuals who possess the skills to interact in a society. Human rights education aims at providing pupils and students with the abilities to accompany and produce societal changes. Education is seen as a way to empower people, improve their quality of life and increase their capacity to participate in the decision-making processes leading to social, cultural and economic policies.

Human rights education cannot be reduced to the simple introduction of human rights content in the already overburdened curricula. It brings about a profound reform of education, which touches upon curriculum in-service and pre-service training, textbooks, methodology, classroom management and organization of the education system at all levels.

Human rights education implies the learning and practice of human rights. A holistic approach to human rights education means that human rights are implemented at all levels of the education system and that they are taught through both content transmission and experiences.

Education for human rights helps people feel the importance of human rights, internalize human rights values and integrate them into the way they live. Education for human rights also gives people a sense of responsibility for respecting and defending human rights and empowers them, through learned skills, to take appropriate action.

## 3.6 SUMMARY

In this unit, you have learnt that:

- The concern for human right received a boost after the Second World War where most of world started advocating social and legal protection of these rights. Establishment of United Nations provides a sound base to develop a comprehensive system of human rights protection through developing different international laws. These are manifested by different conventions, treaties, organizations and political bodies that are based on international laws of human rights.
- Indian Parliament enacted the Protection of Human Rights Act in 1993 which provides for the constitution of a National Human Rights Commission, State Human Rights Commissions in States and Human Rights Courts for better protection of human rights in the country.
- The National Human Rights Commission took a number of important initiatives with regard to access to Health Services, quality assurance in mental health, HIV/AIDS, food security, atrocities against the SCs, and trafficking, systemic reforms in police establishment of Human Rights cells in police headquarters, visits to prisons, mental hospitals and government run homes.
- UNESCO's mission is to work to build peace, to eradicate poverty, encourage ongoing development and dialogues between different cultures with the help of education, science, cultural activities, communication and information.
- UNESCO contributes to the implementation of the World Programme for Human Rights Education (WPHRE), which began in 2004 as a follow-up to the United Nations Decade for Human Rights Education (1995–2004). The Organization supports its member states to design and execute inclusive policies on human rights education through advocacy, targeted actions and the exchange of information.
- In India there are many national commissions that are working in the area of human rights protection. For the protection and promotion of interests of women the apex national organization is National Commission for Women (NCW). NCW works with the objective to give women a platform to raise their voice in case of any violation of any of their rights.
- The United Nations Children's Fund (UNICEF) is a United Nations Programme that provides long-term humanitarian and developmental assistance to children and mothers in developing countries. It is one of the members of the United Nations Development Group and its Executive Committee.
- The basic function of human rights education is to make individuals more aware so that they are able to defend their rights and those of others. Knowledge of human rights constitutes a forceful means of achieving empowerment. Human rights education needs learners and educators working together to translate the language of human rights into knowledge, skills and behaviour. This necessitates developing an understanding of the responsibility each individual has in making those rights a reality at the local, national and international levels: the essence of global citizenship and global responsibility.
- The Constitution assumes responsibility for forming the country's perception of human rights. The Preamble, Fundamental Rights, Fundamental Duties, and Directive Principles of the State policy signify tangible action taken for the actualization of human rights. The protection of human liberty and freedom is covered in Fundamental Rights and Directive Principles of the State Policy, while fundamental goals have been outlined in the Preamble.
- Human rights education is a fundamental part of the right to education and is progressively being recognized as a human right in itself. Acquaintance with rights and freedom is regarded as a basic means for assurance of respect for the rights of all. UNESCO's efforts directed towards bringing about human rights education are guided by the World Programme for Human Rights Education (WPHRE).

## 3.7 KEY TERMS

- **Human Rights Education:** It is the teaching of the history, theory, and law of human rights in schools and educational institutions, as well as outreach to the general public.
- **Curriculum framework:** It is an organized plan or set of standards or learning outcomes that defines the content to be learned in terms of clear, definable standards of what the student should know and be able to do.

**Check Your Progress**

9. Define human rights education.
10. What does curriculum development include?
11. Which are the three contexts for curriculum organization?
12. Give any two reasons why human rights education is necessary.

## 3.8 ANSWERS TO 'CHECK YOUR PROGRESS'

1. UDHR came into being in 1948. After this declaration, different international human rights conventions, resolutions and declarations came into the picture with a similar orientation.
2. Internationally, human right laws follow basic principle of non-discrimination. This is the guiding principle for each and every human right treaty. All the conventions of human rights are guided by the central idea of non-discrimination.
3. The rights proclaimed in the Universal Declaration of Human Rights may be classified into the following four categories:
   (a) General (Articles 1 and 2)
   (b) Civil and Political Rights (Articles 3 to 21)
   (c) Economic, Social and Cultural Rights (Articles 22 to 27)
   (d) Concluding (Articles 28 to 30)
4. The National Human Rights Commission came into existence on 12th October, 1993.
5. The UNESCO has the following two significant global priorities:
   - Africa
   - Gender equality
6. The work of UNICEF can be categorized into the following five main strategic areas:
   (a) Young Child Survival and Development
   (b) Basic Education and Gender Equality
   (c) HIV/AIDS and Children
   (d) Child Protection
   (e) Policy Analysis, Advocacy and Partnerships for Children's Rights
7. Vienna Declaration, Programme of Action
8. The World Public Information Campaign on Human Rights, launched by the General Assembly in December 1988, represented the first serious attempt at coordinated effort for developing awareness of international norms.
9. The relevant provisions of international instruments define human rights education as constituting training, dissemination and information efforts aimed at building a universal culture of human rights by imparting knowledge and skills and moulding attitudes.
10. Curriculum development comprises curriculum planning, devising curriculum policy, execution, and assessment. Curriculum renewal however, must be an ongoing process because the curriculum must be updated as per the changes in various subjects being taught.
11. The three contexts for curriculum framework organization are: direct context, indirect context and implicit context.
12. The two reasons why human rights education is necessary are: it produces changes in values and attitudes of the individual and it produces empowerment for social justice.



## 3.9 QUESTIONS AND EXERCISES



### Short-Answer Questions

1. What are the characteristics of human rights?
2. What are the roles of NHRC and SHRCs in ensuring human rights protection in India.
3. State the work done by World Public Information Campaign on human rights.
4. Write a short note on the need for human rights education in the school curriculum.

### Long-Answer Questions

1. What is human right protection? What steps have been taken globally to ensure human rights protection?
2. How has UNESCO contributed to protection of human rights?
3. List the points of NCW's multi-pronged strategy.
4. Explain the significance and objectives of human rights education in schools.

## 3.10 FURTHER READING

Brownlie, Ian (ed.); *Basic Documents on Human Rights*, Clarendon Press, Oxford, 1991.

Ellis, Anthony (ed.); *Ethics and International Relations*, Manchester University Press, Manchester, 1986.

Asthana, P.; *Women Movement in India*, Vikas Publishing House, New Delhi, 1974.

Bagil, J.C.; *Women's Education in Eastern India*, The World Press, New Delhi, 1956.

### Reference

http://nhrc.nic.in/documents/Publications/HRActEng.pdf

http://birbhum.nic.in/DPSC/reference/86.pdf

# UNIT 4 VALUE EDUCATION AND PEACE EDUCATION

NOTES

## Structure

4.0 Introduction
4.1 Unit Objectives
4.2 Fundamental Concepts of Value
  4.2.1 Meaning and Definitions
  4.2.2 Classification and Hierarchy of Value
  4.2.3 Sources of Value
  4.2.4 Nature of Value
  4.2.5 Types of Value
4.3 Needs and Importance of Value Education
  4.3.1 National Policy on Education (1986 and 1992) on the Needs and Significance of Value Education
  4.3.2 Readjustment of the Curriculum and School Programme for Value Education
4.4 Value Education: Intervention Strategies/Approaches
  4.4.1 Rationale Building Model
  4.4.2 Value Clarification Model
  4.4.3 Social Action Model
  4.4.4 Jurisprudential Inquiry Model
  4.4.5 Living Values-An Educational Programme (LVEP)
4.5 Concept of Peace and Violence
  4.5.1 Indian Perspective
  4.5.2 Non-Indian Perspective
  4.5.3 Theories of Peace
  4.5.4 Approaches to Peace
  4.5.5 Concept of Violence
4.6 Peace Education: Nature, Importance and Objectives
  4.6.1 Objectives and Dimensions of Peace Education
  4.6.2 Education for Peace in India
4.7 Approaches of Conflict Resolution and Education for Culture of Peace and Non-Violence
  4.7.1 Education for Culture of Peace and Non-Violence
  4.7.2 UNESCO's Culture of Peace Initiative
4.8 Municipal Law
  4.8.1 Conflict Resolution in Indian Municipal Law
4.9 Summary
4.10 Key Terms
4.11 Answers to 'Check your Progress'
4.12 Questions and Exercises
4.13 Further Reading

## 4.0 INTRODUCTION

Swami Vivekananda had rightly said, 'Education is the manifestation of the perfection already in the man'. Man is made of three types of constituents i.e. body, mind and spirit. Education must develop all the three and prepare an individual with a broad spectrum of values that would enable the individual to live in a global society. Value

system is the fusion of moral and spiritual values. Anything that helps us to behave properly towards others is a part of our moral values whereas anything that takes the individual out of oneself and inspires one to sacrifice for a great cause for the good of others comes under spiritual values.

Education for excellence is also a constitutional imperative. The fundamental duty under Article 51A of the Constitution of India is to strive towards excellence in all spheres of individual and collective activity. One of the major objectives of education as enshrined in our Constitution is the development of personal values among the students of the nation. We all know that human life is the barest privilege and humans are value seeking by nature. Values form the base for a strong, developed and healthy nation.

Values are regarded as abstract beliefs that transcend specific situation, object and issue and they function as standards of behaviour. For value-oriented education it would be the first requirement that the values, which are to be developed, should be defined. Values are principles, fundamental convictions, ideals, standards, or life stages that act as general guides to behaviour or as reference points in decision-making. Values are beliefs about what is correct or incorrect and what is important in reference to the ideal situation in life.

Values are neither skills nor piece of knowledge; they are basically faith and conviction, like one who has faith in honesty will always be honest. It is something related to the making of the mind and not acquiring it; it is the psychological built-up of an individual. It pertains to the formation of attitudes and habits. Neglect of education in general and inculcation of values through education in particular has been accepted in the '*Challenge of Education-A Policy perspective*', a paper published and circulated in August 1986 by the Government of India. It stated, 'Education is a national responsibility, which is to transform a state society into one vibrant with a commitment to development and change'. The development of human resources is said to be the main function of education. The education system of a country plays an important role in the preservation, transmission and inculcation of values.

Values are determinants of educational aims and in turn religion and culture are the determinants of values. Thus, the values have wide coverage of the social structure in terms of religion and culture. It is, thus clearly evident that values are the basic elements of the educational aims. The values involve three basic aspect, i.e. emotions, activities and cognition which are directly related to the three domains cognitive, psychomotor (activities) and affective (emotions) of the educational aspects as achieved through teaching.

In the National Curriculum Framework (2005), NCERT echoes the vision of integrating values in every aspect of schooling, seeking guidance from the constitutional vision of India as secular, egalitarian and pluralistic society, founded on the values of social justice and equality.

The values enshrined in the Constitution assume paramount significance (NCF, 2005) from ancient days. Education has given much importance to inculcation of values like love, self-realization, brotherhood, tolerance freedom, courage, self-reliance, dignity of labour, honesty, and truth and fearlessness.





## 4.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the meaning, hierarchy, types and nature of value
- List the various sources of value
- Discuss the need and importance of value education
- Analyse various intervention strategies for value education
- Define the concepts of peace and violence
- Explain the nature, importance and objectives of peace education
- Identify approaches of conflict resolution and education for culture of peace and non-violence

## 4.2 FUNDAMENTAL CONCEPTS OF VALUE

A value is what an individual desires, likes or prefers. Value comes from the Latin word '*valere*', which means 'to be of worth or to be strong.' The dictionary gives the meaning of the word 'value' as relative worth, utility or importance, degree of excellence and something (as a principle or a quality) intrinsically valuable.

### 4.2.1 Meaning and Definitions

According to Milton Rokeach, 'A value is an enduring belief, a specific mode of conduct or end state of existence that is personally or socially preferable. Values have both content and intensity attributes. The content attribute says that a mode of conduct or end state of existence is important. The intensity attribute specifies how we rank an individual's value in terms of their intensity which helps to obtain that person's value system. A value system is an enduring organization of beliefs concerning preferable modes of conduct along with the continuum of relative importance. All of us have a hierarchy of values that forms our value system; this system is identified by the relative importance we assign to such values as freedom, pleasure self-respect, honesty, obedience and equality. Further, values are important to the study of organizational behavior because they lay the foundation for the understanding of attitudes and motivation and because they influence our perceptions. An individual enters an organization with preconceived notions about what 'ought' and what 'ought not' to be, of course, these notions are not value free. On the contrary, they contain interpretations of right and wrong. Furthermore, they imply that certain behaviours or outcomes are preferred over others. As a result values cloud objectivity and rationality. Values generally influence attitudes and behaviour'.

'Values may be defined socially approved desires and goals that are internalized through the process of conditioning, learning or socialization that become subjective preferences, standards and aspirations'. —*Radhakamal Mukherji*

'Values may be connected inherently with liking, yet not with everyone but with those which judgment has approved, after examining the relation upon which the object liked depends'. —*John Dewey*

'Value is precisely the term applied.... To objects which stand at the outer end of the relation called liking, the inner end of which is a human mind that likes'.

—*Prall*

NOTES

'Life has a value only when it has something valuable as its object .....Nothing in the world has been accomplished without passion and without value'. —*Hegel*

'Value is that what satisfies human desires'. —*Urban*

In its philosophical or educational interpretation, values signify neither a thing nor an individual but a reflection or a point of view. As such, anything which is useful to an individual becomes valuable to him. The very same thing may be quite useless to another individual and as such it is of no value to that individual. Thus, from the philosophical standpoint, a value is directly related to a view point or thought which may find fruition in favourable environment and conditions.

According to its verbal meaning, values signify that eminence of an individual or things which makes that individual or thing important, respectable and useful. This quality or eminence can be internal or external or both.

Etymologically, values signify quality, and make a things, concept or individual important, useful and worth going in for. Anything that satisfies human wants is a value at the empirical level.

Axiologists believe that values are judgment, but according to them these judgments are emotional and not intellectual judgments. They should not therefore be dealt with as contemporary psychology tends to do, as if they were a phenomena meant only for intellectual consideration. A student of philosophy and education must judge what to value and what to disvalue. It is the task of education to teach a child what to do and what not do.

Values are evolved in social structures gradually through an interface among the members of the society. The person has to adjust in his ecological environment as it is the essential requirement for its survival. He has to face the problems for earning of his living and has to collaborate with the other members of the society and share his responsibility faithfully. He has to interrelate with his culture. In the absence of social value, it would be difficult to maintain peace in the social system. To avoid these types of situations society has to establish certain norms and goals of life. These norms are used in the socialization of children. The values are obtained from human experiences and human existence, from his own ecology, own society and own culture.

Educational values are related to those activities which are good, useful and valuable from the point of view of education. Earlier also it has been pointed by Adams that education is a bipolar process which has two parts: the teacher and the child. The teacher employs various strategies and diplomacy to achieve the desired behavioural change in the child and to mould and adapt the behaviour of the child. He performs all these activities because he thinks them as valuable for the intended purpose. As the teacher provides an atmosphere of utility and value to the child, in the same approach the child takes part only in those activities which he considers useful and valuable to him. Thus, the teacher and the child participate only in those activities which they consider as educationally useful and valuable.

## 4.2.2 Classification and Hierarchy of Value

Values are classified in a number of ways. However, here we are only mentioning the important types of classification.



### Classification of Values

1. Aesthetic values
2. Cultural values
3. Citizenship values
4. Economic or material values
5. Emotional values
6. Ethical values
7. Humanistic values
8. Intellectual or mental values
9. Moral values
10. National values
11. Physical values
12. Religious values
13. Scientific values
14. Social or sociological values
15. Spiritual values
16. Universal values
17. Positive values and negative values

It may be observed that there is no watertight compartmental classification of values as they overlap.

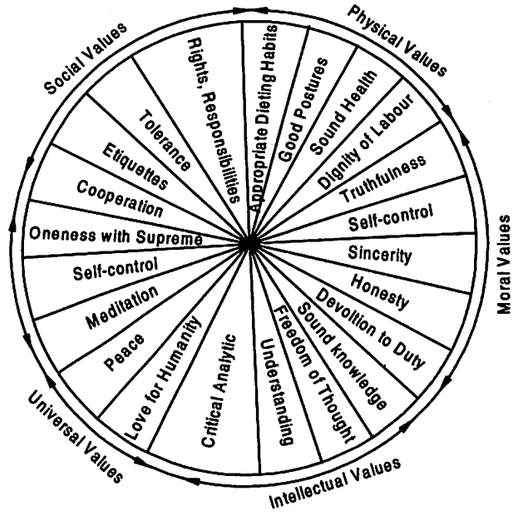



*Fig. 4.1 Human Values*

### Hierarchy of value

Different theorists have classified values differently, based on their priorities. Higher values can be classified into the following five categories in descending order:



NOTES

- Absolute values such as absolute truth, absolute goodness, absolute beauty and absolute holiness
- Act of contributing to the development and happiness of humankind
- Act of contributing to the nation or the state
- Act of contributing to the regional society
- Act of cultivating oneself and managing one's family well

### 4.2.3 Sources of Value

There are many sources of values. Important ones are discussed as follows:

#### 1. Sociological source of value

There are various types of values related to different aspects of social life activities. Some values are related to parents and some values are related to national system. The social life values are related to religious conduct, political conduct, economic conduct, psychological conduct, etc. These types of values are individualistic.

Similarly the social values have one cognitive element. The aspect of value operates in thinking process 'what is right or wrong? This type of value is very close to social norms. It is difficult to distinguish between the two.

According to Johnson, 'values are the ideal rules of a society. A social value integrates the three aspects: emotions, activities and cognitive elements, which operate simultaneously. The difference of these aspects vanishes automatically in social values'.

#### 2. Religious and spiritual source of value

Religion etymologically refers to a state of unification between two aspects which cannot be separated for whatever reason, but has the capability of becoming one again. Religion, therefore, believes in the unity of man and God. Man is essentially God, and because it is so, He has the capability to achieve finite through the infinite; there is unity in diversity because both are essentially one. Religion should therefore help to bridge the gap between man and God by playing on the divine nature of both. Divinity is the essence of religion.

#### 3. Psychological source of value

The culture of a person may be roughly described as the expression of a 'consciousness of life' which formulates itself in three aspects.

*'There is a side of thought, of idea, of upward will and the soul's aspiration; there is a side of creative self-expression, appreciative aesthetic, intelligence and imagination; and there is a higher thinker which view our mind's purest, largest and most general formulation of its consciousness of life and its dynamic view of existence'.*

—Sri Aurobindo

It is an ultimate expression of thought, will and action. 'Values are not taught but are to be caught'. It is a very old saying. It was perhaps true in days gone by when parents at home and leaders in the community in the various walks of life were all value-based people. Then, younger children and growing adolescents could catch values of the elderly people and either by imitation or by special efforts to develop appropriate values accepted and respected in society. Much water has flowed under





the bridge since then and there is a grave deterioration both among parents and community leaders in terms of their being value models for the younger generation. We cannot therefore expect values to be caught from undesirable situations and persons in society in today's world. Therefore values have got to be taught in addition to being caught from selected situations and personalities.

#### 4. Biological source of value

We argue that in mammals, at least, much behavior is caused by mental structures intermediate between stimulus and response. These structures are feelings or motivations. They cause behavior by providing general goals, but without specifying particular actions. The feelings are many, distinct and situation-specific; the complete repertoire of feelings that members of a species normally experience, each weighted according to its situation-specific intensity, is the species feeling profile. Mammals use their perceptual apparatus and intelligence to interpret the world and to anticipate future events. These interpretations and anticipations in turn evoke feelings, which motivate behavior. In any given situation – real or imagined - a number of feelings may be evoked, orienting the animal to a number of different purposes at once. The ensuing struggle among feelings for supremacy is the essence of decision making, and behavior (including verbal behavior in humans) is the result of the triumph of one feeling, or coalition of feelings, over all others.

#### Place of value in the educational systems in ancient india

Truth (*satya*), righteous conduct (*dharma*), peace (*shanti*), love (*prem*) and non-violence (*ahimsa*) are the core universal values. They are the foundation for the building of value-based education programme. These five values are correlated with five major objectives of education, i.e., knowledge, skill, balance, vision and identities. These five human values should be deemed as five-fold life breath or *Pancha Pranas* (*Pranas, Apana, Udhana, Samana*, and *Vyaana* i.e. the incoming, outgoing, upward flow even and circulating breaths). According to the Indian constitution, social values that are to be inculcated in our students are friendliness, cooperation, compassion, self-discipline, courage and love for social justice.

Value education has been an important part of education since Vedic times in this country. It has been the practice in other countries from the time of Plato and Aristotle in Greek history. Both values and education go together. Development of values in educational institutions starting from early education to higher (university and professional institution) is essentially an integral part. The end result of education is human development which is based on certain values which determine human actions in the society. In fact the quality of human action is directly correlated with human values and rather it's the manifestation of human values. In this regard, we can say that 'Education is Value Enterprise'. Human growth and development of societies are always determined by the basic socio-cultural economic, ethical and spiritual values of a particular society.

The educational system of Vedic times was aimed at natural development, social efficiency and mental enrichment. These values were cherished and communicated from teacher to pupil. The process of communication has been described most appropriately as enkindling a light lit up by another light. The purport of all this system of education was to create an aristocracy of character and learning from which would come the required leadership of a community to be looked up to for guidance

NOTES

and *pramana* (example or proof of nobility). These were values of a traditional society which sought to be propagated among the youths so that they may fit themselves into a particular pattern of society and culture governed by what is known as Varnashram dharma. Varna referred to the kind of a social order in which every individual had his on specific role assigned to him by virtue of two factors, one being that of psychological aptitude (*guna*) and the other of acquired skill in a particular occupation (*karma*). The notion of '*Swadhrama*' comes to be developed in so far as it emphasized the concept of 'my station and its duties'. To mould an individual to fit into specific role assigned to him become the subject of education.

So far as the education of masses was concerned, no emphasis was laid on literacy. Education was thought to be possible so far as the generality of the people was concerned through audio-visual modes of communication. Mainly the values which came to be communicated to them by means of *Itihasa* and *Puranas* were the values of *Jnana* (knowledge), *Bhakti* (devotion) and *Vairagya* (renunciation). The education of the masses of people of such sections of them devoted to the pursuit of several arts and crafts of life were left to be imparted to pupils concerned, the *Varnashram* ideal was being continuously placed before them in addition to teaching them that knowledge which led to liberation, that devotion to God by which their emotional lives were fed and nourished and by again exhorting them to learn to practice a spirit of detachment or renunciation in so far as it lay in their power. Examples of great *Gyanis, Bhaktas* and *Viraktas* were continuously being presented to them by all available means of education, like the recital of the Puranas, the performances of the Hari Kathas, Bhajans and Kirtans and by philosophical and religious discourses, delivered by knowledgeable persons. So then, the education of the masses became partitioned first into the mode of education, which would enable them to earn their livelihood by following an art or craft, which came to them by way of heredity or by deliberate choice directed by parents and others. Then there were specific jobs which had nothing to do with the shaping or moulding of the general outlook on *Artha, Karma* and *Moksha*, the ethical, the erotic and the spiritual of which the first three values were looked upon as instrumental and the last one as intrinsic. Might or '*bala*' devoid of personal or desired which did not go contrary to prevailing moral standards were approved. Power with goodness to which it was harnesses was looked upon as a value to be cherished.

*Satyam, Shivam* and *Sundaram*—the truth, the good and the beautiful were looked upon as the ultimate values or axiological criteria. The values in the traditional educational system in ancient India have their challenges to the modern world and modern world has its own challenges to hurl at it.

This kind of education was for life and seems to have constituted the core of the educational systems in ancient India and Gandhi made this principle the basis of his scheme of basic education. He was in line with the ancient theory and practice of education in India. He looked upon literacy and education as only means for the formation of character and not pursuit of knowledge for its own sake.

Professor P.K. Mukerji has rightly said about the relation of Values and the Education, 'Values are socially approved desires and goals that are internalized through the process of conditioning, learning or socialization and they become subjective preferences, standards and aspirations'.



### 4.2.4 Nature of Value



NOTES

Let us try to understand whether values or subjective or objective.

1. **Subjective view:** According to this view values do not exist independently of the 'valuer' rather they find their origin in a valuing organism. Value is depended on factors like, interest, desire, likes hard work, determination power, work or satisfaction. As a result of the combined effort of all these factors the value is developed in the personal life of an individual and is more attached to the personal experiences of that person. Some educators take the view that educational values are internal and subjective. Thus textbooks, school supplies, and other academic paraphernalia have value because of the relation they bear to pupils and teachers who value them. The environment is neither of worth nor is worthless unless an organism involved. Upset the organism's equilibrium, and instinct, emotion, and intellect will at once combine to express a preference. Value is then realized in the native demand for the restoration of balance. In ascribing value to his environment, man is merely projecting these feelings into the objects to which he pays attention. But by themselves these objects have no value until connected with some human interest.
2. **Objective view:** Other educators are inclined to regard educational values as external and objective. To them value is not just a private inner experience. Rather it is an external quality in the things and circumstances which surround teachers and learners. One way of stating it further is that everything has some form or purpose. For instance, the skilled artisan takes wood and steel and fashions them into schoolroom seats and desks. That is, he gives form to these raw materials. This form lends purpose or value to the product. Value, thus, is incorporated into the object; it is objectively part of it.

   Apart from the above two views some educators and philosophers have a third view that values have relationistic view.
3. **Relationistic view:** The educators who follow this view believe that there is relation between human and its environment. They consider values to be partially emotions and partially logic or rational in nature.

### 4.2.5 Types of Value

The varieties of human values are innumerable. Limitation of time delimits the scope of values to be measured. On the basis of frequent mention in literature and their relevance to the indigenous social milieu the values can be listed as given below.

**Moral or ethical value:** Also known as logical values which result from correctly in part and whole relationship.

According to idealists ethical values have the following features:

- Every person is able to do good which is an innate part of his nature and sensation, perception and thought.
- They are obedience to universal moral laws, goodwill, society of ends, and immorality.

**According to naturalists**

- The naturalists are concerned with life's values and have some general character of value.

- They believe in the value which people commonly enjoy, as well as others.
- The ethics of naturalism is hedonistic, as long as this characterization is accompanied by the conscious thought as good.
- The highest good for naturalists is pleasure. The choice of values is based on pleasure.
- The other part of pleasure is the evil, which is also the counter part of highest good. They believe that evils come from society the highest good is given by nature.

**According to realists**

- The moral good can be defined as the happiness of the highest good increases the power of moral values.
- The realists have both spiritual nature and sensory desire.
- Spirit is to be thought of as the permanent potentiality of desire and sensory satisfaction as the temporary actualization of spiritual need.

**According to Pragmatists**

- They try to find the answer to the questions like where do values come from and what is the root of their existence.
- The values have their existence rather than by virtue of the relation with individual and social activities.
- The experience provides the basis of existence of values. The values are the pragmatic guiding principles.
- Pragmatic axiology is the critical issue of values, which involves wisdom and level of value criticism.
- There are two general aspects of pragmatic value i.e., theory and practice, while moral value is another field of values.
- The existence of ethical value is formed by an individual–social life process.

**Religious value:** Religious value is defined in terms of faith in God, attempt to understand God, fear of divine wrath and acting according to the ethical codes prescribed in the religious books. The relation of the religion and values lie in the sense that a person's religious convictions, if he has any, will fix significantly what value of life shall be for him.

Hocking holds the view that religion is as much a matter of ideas as it is of feelings, and that the root ideas in the religion are bound to constitute a criterion by which the rest of the life is judged. It is though much obvious that the most central of the ideas in the religion is the idea of the supreme soul i.e. God almighty. Therefore for a religious person at least the conception of God is likely to be the central or hub of all the value experiences, and from it all other values will sprout.

**Specification of religious value:** There are two values which are supreme. Six others may be mentioned which are important, but they are derived from the two central ones which are—(1) Experiences of God in the self-consciousness (2) Experience of love for God. It encompasses such desires as the longing for spiritual self-preservation, for ultimate judgement of life, for perpetual renewal of the work of life, and for immortality. It is essentially a simple urge towards God.

- One of the less fundamental values of the transformation of the self which sometimes takes place in worship, and in which the whole-part relation is





significant. In worship the believer finds his true self by consciously relating himself to the whole self in a face-to-face meeting.

- Religious experience has value on an epistemological score. For it is possible to have some new knowledge of truth divulged to us in a worship experience. That is to say that insight is sharpened and understandings are sometimes given birth in us which reason and experience have not revealed to us.
- Another value arising in religious experience is an enlargement of the capacity of creativity.
- There is also in religion the experience of vicarious success. A person may feel that he has failed in the realising of some good. He may even doubt if he or his generation shall ever succeed in achieving divinely intended ends at all.
- Attached with this value is its complement, which Hocking terms 'prophetic consciousness'. It is the development or creation of a literal, visionary and responsible faith in us that comes only after long, tough labour
- At the end a very common value of religion is that which is based on reality and it will certainly enhance all the other human attachments
  - o Thus to recapitulate we can say that according to Hockings the religious values are consciousness of God, love for God, transformation of the self some knowledge of truth, the development of creativity, enjoyment of vicarious success, deliberate actualizing of divine goodness and the general enhancement of all human relations.

**Social value:** Social value is defined in terms of charity, kindness, love and sympathy for the people and efforts to serve God through the service of mankind.

According to Idealism, social values are as under:

- The social responsibilities are related to it.
- Plato has considered this value to be the best for national and social development.
- The basis for this value is the social norms, social efficiency and the social adjustment.
- Formulating and planning new principles and objectives for social development.
- Personality and human development are based on the social development.

Naturalism has laid down the following points for social values:

- More emphasis is given to weight, age and nature than society.
- Rousseau says that society is the cause for maximum evils that is occurring in the society.
- According to naturalism there are no social values.

Realism gives its following view on social values:

- Naturalism lays more emphasis on physical world.
- It depends on individual faith and beliefs.
- Social norms are developed by these values.
- Person is a member of the society. He/she influences the society.
- A person is a physical and social unit. He/she have their own beliefs and realization.

NOTES

Pragmatism has the following views on social values:

- Person and society is the central point of this school.
- Person is prepared for the society.
- The school has the main social values.
- The social efficiency has the specific importance.
- The society is the base of human life.
- Social adjustment is main process.

**Aesthetic value:** Aesthetic value is characterized by appreciation of beauty, from proportion and harmony, love for fine arts, drawing painting, music, dance, etc.

Aesthetic values according to idealism:

- These types of values are behind the perceptual world
- Artistic abilities and skills provide enjoyments
- Plato considers it as specific ability and specific subject
- Music is best aesthetic values
- It is dominated by feelings or affective aspect

Naturalism gives the following opinions about aesthetic values:

- It is also known as experience values
- The specific experiences provides pleasure and happiness
- It is the human nature
- It is higher level of perception
- They do not accept the value beyond nature and matter

Realism has following concepts regarding aesthetic value:

- It is related to recreation
- Beauty is thinking of realization, skills and artistic ability
- It is related to feeling and interest of a person
- Sometimes this type of value are realized but cannot be expressed
- It is mainly related to the emotional aspect of person and this appreciation

Pragmatism holds the following views related to aesthetic values:

- Evaluation of experiences is an aspect of aesthetic values
- Aesthetic value depends on understanding
- All experiences have some specific values
- Aesthetic values are individual and social
- Our experiences have aesthetic values
- Music has the highest aesthetic values
- Artistic activities have these values

**Democratic value:** Democratic value is characterized by respect for individuality, absence of discrimination among persons on the basis of sex, language, religion, caste, colour, etc. The following are the main values or beliefs related to democratic values.

- **Rights of an individual:** Right to life, dignity, security, liberty, equality of opportunity, justice, to privacy and to private ownership of property
- **Freedom of an individual:** Freedom to participate in the political process, to worship, of thought, freedom of conscience, freedom of assembly, inquiry and freedom of expression





NOTES

- **Responsibilities of an individual:** To respect human life and respect the rights of others. To be tolerant, honest, compassionate. To demonstrate self-control and participate in the democratic process and lastly to respect the property of others

**Economic values:** Economic value stands for desire for money and material gains. These values are measured in the terms of expression as 'how much' of one desirable condition or commodity will, or would be *given up* in substitute for some other much loved condition or commodity. *John Ruskin*, a very famous and leading English art critic belonging to the *Victorian era* had published an appraisal of the economic concept of value from a moral point of view in 1860. His volume was entitled '*Unto This Last*' and his central theme was:

> 'It is impossible to conclude, of any given mass of acquired wealth, merely by the fact of its existence, whether it signifies good or evil to the nation in the midst of which it exists. Its real value depends on the moral sign attached to it, just as strictly as that of a mathematical quantity depends on the algebraic sign attached to it'.

Any given amassing of marketable wealth may be pinpointing on the one hand, to faithful industries, progressive energies, and productive ingenuities or on the other, it may be indicative of worldly luxury, hardhearted autocracy, disastrous chicanery.

**Knowledge value:** Knowledge value stands for love of knowledge of theoretical principles of any activity and love of discovery of truth.

**Hedonistic value:** Hedonistic value is defined as the conception of the desirable of loving pleasure and avoiding pain.

**Power value:** Power value is defined as the conception of desirability of ruling over others and also of leading others.

**Family prestige value:** Family prestige value is defined as the conception of the desirability of such items of behavior, roles, functions and relationships as would become one's family status.

**Health value:** Health value is the consideration for keeping the body in a fit state for carrying out one's day-to-day duties and functions.

**Environmental values**: Environmental Values have their contribution in disciplines like geography, sociology, anthropology, philosophy, economics, politics, ecology and other disciplines, which share the current and prospective environment of human beings and other species. It is aimed to elucidate the relationship between realistic policy issues and more fundamental principles or assumptions. The present pattern of the human activity on the earth has resulted in the degradation of environment. The narrow perception of reality is the main cause of environmental crisis and it includes all kinds of land, air and water pollution. Multiple factors are responsible for the degradation, some of them are as follows:

- Human population explosion
- Large amount of Chlorofluorocarbon (CFCs) generation
- Biodiversity in the nature
- Radiation hazards and unbalanced ecology
- Advancement of technology

NOTES

Environmental values can be well developed among the children and the society by:

(i) *Creating a healthy family environment*: Family is an informal institution where good social qualities and habits can be well developed.

(ii) *Effective role of school*: School is considered to be a miniature society and contributes for positive socialization of the child.

(iii) *Community role:* Community develops cultural environment for the values of the life and it makes educational process more meaningful and purposive.

### Rokeach Value Survey

Milton Rokeach created the Rokeach Value Survey (RVS). It consists of two sets of values, with each set containing eighteen individual value items. One set is called terminal values which refer to desirable end-states of existence and the other set is called instrumental values. These are the goals that a person would like to achieve.

*Table 4.1 Terminal and Instrumental values in Rokeach Value Survey*

| Terminal Values | Instrumental Values |
|---|---|
| An exciting life (a stimulating, active life) | Broad-minded (Open minded) |
| A sense of accomplishment (lasting contribution) | Capable (Competent, effective) |
| A world at peace (Free of war and conflict | Cheerful (lighthearted, joyful) |
| A world of beauty (beauty of nature and the arts) | clean (neat, tidy) |
| Equality (brotherhood, equal opportunity for all) | courageous (standing UP for your beliefs) |
| family security (taking care of loved ones) | Forgiving (willing to pardon others) |
| Freedom (independence, free choice) | Helpful (working for the welfare of others) |
| Happiness (contentedness) | Honest (Sincere, truthful) |
| Inner harmony (freedom from inner conflict) | Imaginative (daring, creative) |
| Mature love (sexual and spiritual intimacy) | Independent (Self-reliant, self-sufficient) |
| National security (Protection from attack) | Intellectual (Intelligent reflective) |
| Pleasure (an enjoyable, leisurely life) | Logical (Consistent, rational) |
| Salvation (saved, eternal life) | Loving (affectionate, tender) |
| Social recognition (respect, admiration) | Polite (Courteous, well-mannered) |
| True friendship (close companionship) | Responsible (dependable reliable) |
| Wisdom (a mature understanding of life) | Self-controlled (restrained, self-disciplined) |

**Check Your Progress**

1. What are the content and intensity attributes of value?
2. What all does a social value integrate?
3. What is prophetic consciousness?

## 4.3 NEEDS AND IMPORTANCE OF VALUE EDUCATION

The concern for value education is reflected in our key policy documents from time to time. After Independence, the National Commission of Secondary Education (1952-53) was a significant landmark in emphasizing character building as the defining goal of education. The shift of focus, over the decades, from religious and moral education to education for peace, via value education, parallels the shifting sense and sensitivities in the larger context of education. The acceptance of education for peace as a necessary





NOTES

ingredient of holistic education in the western context was driven by deepening anxieties about the rise and spread of violence. A similar pattern is obtained in our context as well.

### Why education for values?

A most important reason for reorienting education for values is the fact that the current model of education contributes to the lopsided development of students. This model of education puts exclusive focus on cognitive to the total neglect of the affective domain and presents alienation between head and heart. Students are nurtured in a spirit of excessive competition and are trained right from the beginning to relate to aggressive competition and facts detached from contexts.

The individualistic idea of excellence is promoted at the cost of emotional and relational skills. Young learners hardly understand why they are in school, why they are studying different subjects and how their schooling will be helpful to them. Their understanding is limited to learning about the subjects. They hardly know how they should live their lives, commit themselves to the welfare of the country, care about the environment and other social and moral issues. They are not clear as to what sort of persons they hope to become when they complete their school education.

Education of this kind turns children into machines. Such a perspective defeats the very purpose of education - the wholesome development of personality including ethical development which is fundamental for making responsible decision making in case of moral conflicts.

Improvement of the quality of education has always been the key concern for education. In recent times, quality education has been defined in more pragmatic terms. It has become synonymous with employability, preparation for the word of work, less and less consideration is given to the subject of education i.e. individual student and his/her full development as a human being.

Improvement of quality of education is not the only reason for value education. The current resurgence of interest in education as a powerful means to inculcate values among students is also due to the fast degeneration of values in our country. Despite considerable progress made, our society is shaken by conflicts, corruption and violence. There has been distortion in our value system.

The problem of declining values is multi dimensional arising out of combination of major social forces such as globalization, materialism, consumerism, commercialization of education, threats to humanity due to climatic changes, environmental degradation, violence, terrorism.

### Causes of Value Crisis in Present Society

1. **Challenges of traditional values:** In the past, the society in which we were living was well protected and self-contained. But today the technological advances have brought many changes at the personal, racial, social and national levels. Man has to adjust himself to all the variations, and this has given rise to a crisis in the value system.
2. **Development of the attitude of cynicism:** The attitude of people towards the existing value system is turning out to be negative. Rejection of the pre-existing values and not believing in formulating new ones has brought deterioration of the moral values.

3. **Loss of leadership and ethical values in teachers:** Teachers have three important functions to perform i.e. to teach, set examples for others and have influential effect. But in this materialistic society teachers have lost their sense of devotion and dedication towards their profession. Teachers must themselves set examples for their students; only preaching will not help the students to follow the right beliefs and values.
4. **Undue emphasis on literacy**: Just getting a certificate or degree from college or university is not sufficient to qualify a person as literate. Even an illiterate can possess good qualities under the influence of right education, guidance and values.
5. **Impact of materialistic philosophy on modern society**: In the mad race of money and power people are neglecting values. For people only materialistic things are more important rather than living an ethical life.
6. **Increasing emphasis on Individualism**: In current scenario the social bonding has lost its strength and people are developing a hedonistic outlook. Love and affection even among the family members is getting lost. Thus people are not able to develop the sense of loyalty and sacrifice.

**Importance of Value Education**

- Value education develops a healthy and a balanced personality.
- It enables child to earn his livelihood and to acquire material prosperity.
- It develops vocational efficiency.
- It develops character and morality of the children.
- It makes children ideal citizens.
- It helps in reconstruction of experiences.
- It enables the children to adjust to their environment.
- It promotes social efficiency.
- It develops cultural values.
- It inculcates the feeling of national integration.

### 4.3.1 National Policy on Education (1986 and 1992) on the Needs and Significance of Value Education

The National Policy on Education (NPE; 1986) highlights the urgent need for value education in view of the growing erosion of essential values and increasing cynicism in society. With a well-designed system of curriculum, it is possible to make education a forceful tool for the cultivation of desirable ethical, moral, spiritual and social values. Education should foster universal and eternal values. Value education should help to eliminate obscurantism, religious fanaticism, violence, superstition and fatalism. Education which inculcates universal and eternal values like compassion, courage, honesty, and tolerance and truthfulness, will help in developing balanced individuals and in creating a humane society.

The National Policy on Education (1986 and as amended in 1992) observes, 'Every country develops its system of education to express and promote its unique socio-cultural identity and also to meet the challenges of the times. There are moments in history when a new direction has to be given to an age-old process. That moment is today.'





NPE has further observed, 'Education has an acculturating role. It refines sensitivities and perceptions.'

The NPE has further expressed its concern over 'value crisis and the role of education' as, 'The growing concern over the erosion of essential values and an increasing cynicism in society has brought to focus the need for readjustments in the curriculum in order to make education a forceful tool for the cultivation of social and moral values'.

The Programme of Action on National Policy on Education (1986) in the chapter entitled 'The Cultural Perspective' under the sub-heading 'Institutes of Moral Education' has made the following observations:

> 'A special place has been assigned to imparting of value-oriented education in the Education Policy document. A beginning would be made by instituting a special study on value-oriented education. Based on its analysis, it would in collaboration with NCERT and state institutions, help in suggesting broad parameters of values of integrity truth, devotion, loyalty, etc., with particular reference to their embodiment in Indian heritage, so as to blend naturally with the overall educational process.'

### 4.3.2 Readjustment of the Curriculum and School Programme for Value Education

A comprehensive programme of value education is the need of the hour. The following schematic representation of the process of value education illustrates the entire programme of value education.

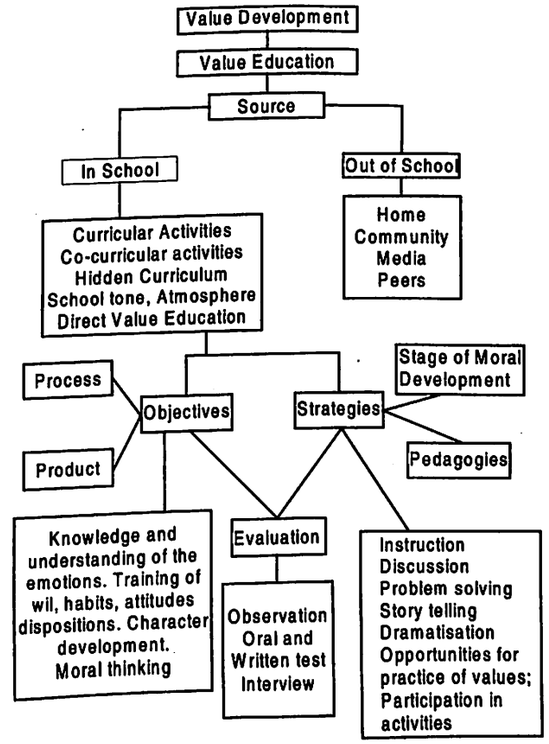



*Fig. 4.2 A Schematic Representation of the Process of Value Education*

***Source:*** National Seminar on 'Philosophy of Value Oriented Education—'Theory and Practice' 18–20 January 2002, Delhi.

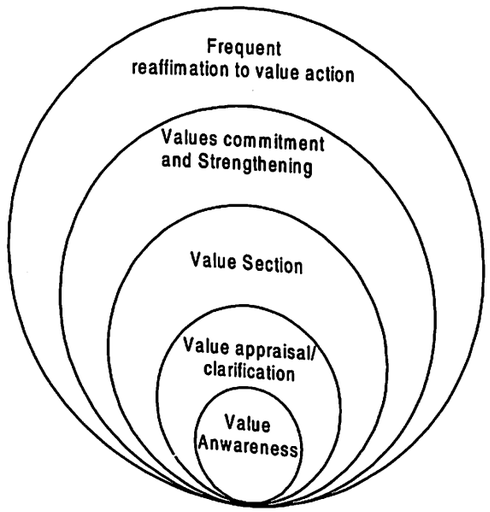



*Fig. 4.3 Ever Evolving Circle of Value Education*

***Source:*** Journal of Value Education, July 2003, NCERT

### Fourfold Programme for Value Development

**1. Project and Activities**

Following are the important activities to be undertaken in the school in this regard:

1. Celebration of national festivals
2. Social service programmes
3. Emphasis on the unity of all religions, harmony among communities and national integration
4. Development of scientific temper
5. Community prayer in the school
6. Health and cleanliness programmes
7. Socially useful productive programmes
8. Citizenship training programmes
9. Cultural and recreational programmes
10. Student self-government in schools
11. Introduction of information technology
12. International understanding
13. Appropriate teaching-learning situations

**2. Talks**

Emphasis should be laid on the unity of all religions, appreciation of the sentiments of faith of all sections of the society, harmony among communities, linguistic groups and emotional and national integration.

**3. Removing prejudicial contents from textbooks**

Special drive should be undertaken to ensure that the textbooks contain unbiased material and in no way hurt the feelings of any section of the society.



**4. Role of the school staff and especially of teachers in value development**



The teachers must play an important role in such programmes. The most important aspect is that they should set good examples of conduct and behaviour which the students may imbibe in themselves.

It may be stressed that the teachers, the educational workers, the educators, the supervisors, the administrators and above all the parents must try their best to promote value-oriented education.

India is on the move again with the promise of new renaissance in the making. The most powerful tool in the process of this renaissance and modernization is education based on secular values on the one hand and on the other on science and technology. In this context Pt Jawaharlal Nehru said, 'Can we combine the progress of science and technology with the progress of mind and spirit also? We cannot be untrue to science because that represents the basic fact of life today. Still less can we be untrue to those essential principles for which India has stood in the past throughout the ages. Let us then pursue our path to industrial progress with our strength and vigour and at the same time remember that material riches without toleration, compassion and wisdom may well turn to dust and ashes'.

## 4.4 VALUE EDUCATION: INTERVENTION STRATEGIES/APPROACHES

Studying and application of value education in curriculum and educational discussions is getting greater importance day by day. A greater emphasis has been given by National Policy of Education (NPE), 1986, on the issue of value education.

National Curriculum for Primary and Secondary Education (1985), is also in sync with NPE, 1986 in terms of the agreement on crunch of values our society. The National Commission on Teachers (1983) also stated that the foremost objective of Indian education system should be 'to lay down clear objectives for the teaching profession with reference to the search for excellence, breadth of vision and cultivation of values.' In 1983, in order to fulfil this objective Government of India recommended inclusion of value education as an essential module in the teacher education programmes in addition to regular curriculum, methodology and teachers role.

Value education includes a wide range of learning and activities varying from training in physical health, mental hygiene, etiquettes and manners, appropriate social behaviour, civic rights and duties to aesthetic and even religious training.

In most general terms, value education is simply an issue of inculcating suitable conduct and habits which is done by developing constructive qualities. In more specific and broader terms, value education must have cognitive factor in its activities, which is more permanent in nature than creating habits. The main viewpoint behind this perspective is that the aptitude to make moral judgement must be based on sound reasoning and it cannot be neglected in deliberate activities and learning processes of value education.

It is believed that the moral development of a child is inevitable outcome of schooling and its mini society. In this mini society a child develops the attitudes, standards, values, ethics and general conduct in order to adjust himself according to the norms of his social circle. Value education sustains the child in such adjustment.

**Check Your Progress**

4. **State whether True of False**
   (i) The shift of focus, over the decades, from religious and moral education to education for peace, via value education, parallels the shifting sense and sensitivities.
   (ii) Our value system has remained intact for ages.
5. Value education develops vocational _____.

NOTES

But this view point is not widely excepted as morality is not about pointing out what is there, rather it is about what should be there and what should be done.

There is another ideology about value education is that it is process of humanization of feelings and emotions i.e. developing right feelings and emotions. The cognitive ability of the child does not play any role in it. It is like talent, either one is born with it or not at all have it. But morality can be achieved modelling one-self by imitating after an ideal which requires a model atmosphere and learning by example. This ideology is opposed on the grounds that morality and values are not contagious in nature. It cannot be transferred from one person to another through superficial imitation. Value development requires a personal thought process and individual reasoning power. This individual reasoning enables the person to choose a true action for true reason, rationally.

### Objectives of Value Education

In context of value education the objective are time-based. They have their own age, and live and die according to the need of time and society. Earlier, religion and idealism were the basis of objectives of value education. Then there was the time of secular value education. In the modern context, there are varieties of demands with respect to social, emotional, intellectual conduct of a person. A civilised person is expected to be socially skilled in order to maintain a polite relationship with his fellow beings. This in turn is expected to be paid back to him in similar fashion. The civilized person must possess a conduct which aids functioning of his family, society, state, country and world in the larger perspective. So value education in modern times must prepare an individual to meet these demands. And this objective cannot be achieved merely by enumerating some points on a chart or blackboard.

A most correct and suitable value education system must be balanced which adequately connect its five dimensions viz. physical, emotional, cognitive, aesthetic and spiritual.

- **Physical dimension:** It is well-known that 'sound body has a sound mind', therefore physical education is must in order to prepare the body, and get the brain ready for possessing a broader perspective on life.
- **Emotional dimension:** A student must feel connected to his teacher, his fellows and to himself in order to be value oriented.
- **Cognitive dimension:** Selection of value and morals is individual process. One must choose a right action for a right reason, which is possible only through rational thinking process.
- **Aesthetic dimension:** Ability to admire the beauty of a creative idea is essential part of value development. It develops the quality of acceptance of other's ideas.
- **Spiritual dimension:** It includes inculcating qualities of sincerity and faithfulness to what one considers to be the highest, gratitude, honesty, benevolence, generosity, cheerfulness, selflessness, freedom from ego, equanimity in joy and suffering, honour in both success and failure, pursuit of the deepest and the highest of the absolute and ultimate and the progressive expression of this pursuit in thought, feeling and action.
- In many people's viewpoint the modern values emphasise only socio-economic factors. And conventional cultural values are being neglected. But the modern value education in its true sense, must have its roots on the firm ground of traditional culture and must shoot up to higher levels of innovation.





NOTES

### 4.4.1 Rationale Building Model

The rationale building model is primarily concerned with the realm of judging. Much of the debate over moral education in recent decades has centred on the advantages and disadvantages of two dominant educational models to the moral formation of children, referred to as traditional character education and rationale building model. Traditional character education focuses on the inculcation of virtuous traits of character as the proper aim of education. In contrast, rationale building model seeks to facilitate the development of autonomous moral judgment and the ability to resolve disputes and reach consensus according to canons of fairness. The first model is concerned with the educational requirements that contribute to the formation of character. The second is concerned with the development of reasoning and autonomy.

### 4.4.2 Value Clarification Model

The value clarification strategies are modelled not only to teach specific values to the students but also to inculcate in them an internal awareness, own personality, character and temperament. These strategies also enable students to compare themselves to their friends, elders, and other members of society. It is believed that with the increased awareness students will be able to re-evaluate and will try to adapt better values and also will be able to hold on own values more confidently which they found to be good. The procedure followed in this model is as follows:

A fairly designed value clarification can take variety of forms, but all the designs, activities and models must follow a basic route.

- A low risk issue is taken as inaugural activity by the teacher in form of lesson.
- Students are expected to portray their initial and clear positions on the presented issue.
- The teacher must stay neutral and non-judgmental in the whole activity. He should discourage mocking and challenges by students to each other's expressions.
- The student should be carefully encouraged to give explanation for their given obvious reaction to the presented issue.
- The teacher must try to relate the activities to historical events, current social and political concerns, whenever required.

The basic essence of value clarification strategy is that there should be no assessment, until students themselves share their experience.

### 4.4.3 Social Action Model

The social action model is unique and idiosyncratic procedures by specific distinguishable firm goals are achieved. These goals have specific stages which are to be followed during the execution of the model.

There are two main models of social action as given by Britto (1984). They are:

(1) Elitist social action

(2) Popular social action

NOTES

As the name suggests, elitist social action is when a social act is conveyed exclusively by the elite person or group of the society and only negligible participation can be contributed to the masses or general population. Most of the time such social actions are group actions. The underlying objective of the action is for the benefit of the masses but the general public or the target group is not involved.

The second model, popular social action, is that in which the action take place at larger levels with or without elite participation. These actions can be characterized as confrontational/conflictive, most against prejudice and degrading structures, policies, procedures agencies, and/or unfair representations.

### 4.4.4 Jurisprudential Inquiry Model

The literal meaning of jurisprudence is science or philosophy of law, or the knowledge or skill to deal with issues in legal fashion. Oliver and Shaver (1974) designed this method; they defined this method as the jury process of resolving complex controversial issues within the context of a productive social order. In other words, it is a process of inquiry done by Supreme Court judge for solving debatable issues. The judge makes the best possible decision after carefully listening and analyzing the positions of both sides of an issue, weighs these positions and evidences and assesses the meaning and position of law.

In an educational setting, this role is played by the teacher in association with students, and tries to analyze a social issue or public policy and is called Jurisprudential way of teaching. This model is useful in understanding of the complexity of problems and enabling students to establish their own position to reflect upon the complexity.

This method aims at enabling students to frame a simple position regarding a complex social/public issues.

Students are helped to build three types of competence i.e.

(i) An understanding into framework of Indian values.

(ii) Mastery of the intellectual skills of legal reasoning.

(iii) Knowledge of current social/public issues.

This method involves conception of values and productive dialogue as well as curriculum and pedagogical consideration. During the process of dialogue, student takes a position and the teacher challenges the position with questions. The teacher's questions are designed to push students' thinking about their stance and to help them learn. The teacher orients the class to the case and students usually become emotionally involved in the analysis, making the discussion intense and personal. With more practice, it is hoped that their positions will become more complex and well formulated. In a nutshell, the specific features of this model help the students to develop competency in social dialogue and comprehend the values involved in a particular social situation.

### 4.4.5 Living Values-An Educational Programme (LVEP)

Living Values-An Education Programme (LVEP) is an offshoot of Brahma Kumari's, Religious Organization, named as 'Sharing Our Values for a Better World', which started in 1995. It was formally founded by Brahma Kumari devotee Diane Tillman, who is a licensed educational psychologist and marriage and family therapist in Seal Beach, California, in association with co-authors Diana Hsu, Pilar Quera Colomina and other Brahma Kumari followers. The roots of 'Living Values' lay in an early Brahma Kumari international service programme called, 'Global Cooperation for a Better World' started in 1988. It was formalized at the Brahma Kumaris' United Nations office, New York in 1996. In 1999, a USA-based non-profit corporation, Living Values: An Educational Program, Inc. (LVEP, Inc.) was established to further develop and disseminate the program worldwide. LVEP, Inc. provided initial support to the formation of an international coordinating organization (ALIVE) in 2004. As of March, 2011, LVEP was estimated to be in use in over sixty countries at thousands of sites.





NOTES

#### Objectives and activities

LVEP is designed in order to provide professional development courses and educational resources to the educators who further help young people to explore and develop universal values in accordance of their cultural background. There are twelve universal values:

1. Freedom
2. Cooperation
3. Tolerance
4. Happiness
5. Honesty
6. Love
7. Peace
8. Humility
9. Respect
10. Responsibility
11. Simplicity
12. Unity

These values can be expressed in life through attitude, behaviour and relationships. The educational program helps children, youth, educators and parents to understand, develop and share values in daily life.

Living Values Education Programme (LVEP) is designed as a way of conceptualizing education which lies in the foundation of value-based learning, which aims at searching for meaning and purpose of life. Worth and reliability of each individual involved in the scope of education and as of all the social agencies viz. home, school and community is the fundamental principal of LVE. The LVE is a supporter of quality education, which means all round and overall development of an individual who lives as per positive values. Basically the belief that education is a purposeful activity for human growth forms the crux of LVEP.

The application of Living Values Education is sponsored by the Association for Living Values Education International (ALIVE), which is a non-profit-making association of organizations around the world concerned with values education. Drawing on a strong volunteer base, the advancement and implementation of Living Values Education is supported by UNESCO and a host of other organizations, agencies, governmental bodies, foundations, community groups and individuals. It is part of the global movement for a culture of peace in the framework of the United Nations International Decade for a Culture of Peace and Non-Violence for the Children of the World. ALIVE gathers together national bodies promoting Living Values Education

NOTES

and is an independent organization that does not have any particular or exclusive religious, political or national affiliation or interest.

In 2001, LVE's series of five books won 'The Teachers' Choice Award' by 'Learning Magazine', a national publication in the USA for teachers and educators. Separate programmes exist for children at risk including refugees and Children Affected by War (LVARCAW), street children, youth in need of drug rehabilitation and young offenders. The Ministry of Labour in Vietnam noted in March 2008 that LVE's drug rehabilitation program was the most successful drug rehab program in government rehabilitation clinics in the country.

## 4.5 CONCEPT OF PEACE AND VIOLENCE

Peace is mostly conceived as the absence of war or at the most the absence of overt violence. Most efforts to secure peace were, thus focused on preventing the outbreak of wars or trying to get a ceasefire in place so as to stop the war as soon as possible. But religious and philosophical traditions have elaborated on peace at length. Most of these are focused on equality, harmony and non-violence. These religious and philosophical ideas continue to shape the ideas about peace. However, in contemporary times peace is not seen as just an idea, 'it is a goal that can be obtained by conscious efforts to build a harmonious social order'.

### 4.5.1 Indian Perspective

#### Mahabharata and Gita

The Mahabharata, a Hindu epic, describes a civil war that took place between cousins belonging to a royal family – the Kauravas and the Pandavas. Arjuna, one of the Pandava warriors, refuses to fight his own family members and relatives who belong to the opposing camp as it would entail killings among brothers. However, Krishna manages to convince him to fight by telling him that it is his duty to do so.

The most important part of the Mahabharata is the *Bhagwad Gita* popularly known as the *Gita*. The *Gita* explains human beings how to lead a happy and peaceful life in a world that is full of dualities and dilemmas. Its central teaching is that human beings can attain happiness and peace by performing one's duty. One should perform one's duty efficiently irrespective of the outcome and without being attached to the result. *Ahimsa* should be the norm but if duty requires violence as in the case of Arjuna, then it is unavoidable. The *Gita* inspired Gandhi for it de-emphasized the 'individual self in the pursuit of higher goals.'

#### Jainism

In Jainism, peace is not just an idea, it is practically possible to attain and establish peace. For this one needs to be moral. The trinity of values that are stressed in Jainism is *maitri* (friendliness), *kshama* (forgiveness) and *abhaya* (fearlessness). Establishing universal friendliness was the main concern of Mahavira, the last of the twenty-four *tirthankaras* of Jainism. This would require purification; the more one purifies oneself the more good one can do for others. *Ahimsa* or non-violence and *anekanta* are the two basic tenets of Jainism. Non-violence is a way of life and includes harmlessness, tolerance and non-hatred towards others. *Anekanta* means that there are many shades

**Check Your Progress**

6. What projects can be undertaken for value development in schools? Name any five.
7. What is the spiritual dimension of a value education system?
8. Which are the two main models of social action?
9. Who founded LVEP and when?





NOTES

of the truth or reality; there is no one truth. A*himsa* and *anekanta* put together are principles of peaceful co-existence.

#### Buddhism

Buddhism believes in the interconnectedness of all things. It lays emphasis on non-violence and compassion and thus is anti-war. The Four Noble Truths as enunciated by Gautama Buddha are the central to the Buddhist thought:

- Life is about suffering or *dukha* which includes mental and physical suffering such as anxiety, fear, frustration, sadness, injury, old age and death. Human beings want to hold on to things but nothing is permanent in this imperfect and constantly changing world. As a result we are all dissatisfied.
- The origin of suffering is attachment or 'craving' and 'clinging'. Human beings not only crave for desire, fame, wealth etc. but are also ignorant about this craving. We are ignorant about the transient nature of all things around us.
- Suffering can be ended through *nirodha* or dispassion. Through *nirodha* all attachments can be extinguished. The ultimate level of dispassion is *Nirvana* wherein people become free from all worries.
- The Eight-fold Path, a gradual middle way of self-improvement, can end suffering by ending the cycle of rebirth.

The fourteenth Dalai Lama, a Tibetan Buddhist monk and the spiritual leader of the Tibetan people, emphasizes that peace can be attained through compassion and love. This compassion and love is based on selflessness and not selfishness. Promotion of humanitarian values is essential to secure happiness and world peace. This can be done by developing universal responsibility where all human beings show concern and compassion for one and all, irrespective of any discrimination. The basis of universal responsibility is interconnectedness and the fact that all beings have the same desires; all want happiness rather than suffering.

#### Ashoka's Dhamma

After the battle of Kalinga where the Kalingans lost, Ashoka gave up military campaigns being moved by the pain, destruction and violence caused by the war. He converted to Buddhism and dedicated the latter part of his life to non-violence. He enunciated the ideology of the *Dhamma* which was inspired by Buddhism. In order to propagate the *Dhamma*, Ashoka issued proclamations which were engraved on rocks and pillars in different parts of the Indian subcontinent. These were addressed to the public at large and explained his ideas on the *Dhamma*. Ashoka's *Dhamma*, in the words of Romila Thapar (an Indian historian) 'aimed at creating an attitude of mind among his subjects in which social behaviour had the highest relevance.'

In the fourth major rock edict, Ashoka proclaimed his interest in *Dhamma* – abstention from killing and non-injury to living beings so as to foster goodwill rather than the militarist spirit. *Dhamma* focused on tolerance, non-violence, respect for people in authority, kindness towards the weak and inferior, and other such values that are favourable to human dignity. Tolerance referred to two things:

'Toleration of people themselves and also of their beliefs and ideas'. Non-violence was fundamental to *Dhamma*. It 'implied both a renunciation of war and conquest by violence and a restraint on the killing of animals'. Ashoka however realized that complete or absolute non-violence was not practical as in some situations violence

NOTES

may be unavoidable. The thirteenth edict was left out of the texts engraved on the rocks in Kalinga because Ashoka believed that it would remind the people of his attack and the consequent violence and stir their emotions.

### Sufism and the Bhakti Movement

The Sufis were non-conformist in their beliefs and emphasized on equality in society. They stressed on rational thinking and pursuing knowledge by employing empirical observation.

Islam and particularly the teachings of the Sufis had wrought major influence on the Bhakti movement, though the devotional Bhakti cults were a pre-Islam phenomenon. The leaders of the Bhakti movement were critical of institutionalized religion, rituals and the caste system and were opposed to violence. They treated women equally and encouraged them to join the movement.

The two Bhakti leaders who contributed the most through their teachings were Kabir and Nanak. 'Kabir either denied the Hindu and Muslim ideas of God or else equated them by stating that they were identical...Nanak went a step further and described God without reference to either Hindu or Muslim conception'. Both emphasized on living simply and leading a normal, balanced life; they were critical of extreme ways and methods of living. Kabir and Nanak both wanted to reorganize the society on egalitarian patterns.

Sufi and Bhakti conceptions of peace were liberal traditions opposed to orthodoxy. Both believed in union with God and 'love' was to be their basis of relationship with God. Both Sufi and Bhakti traditions were instrumental in producing a culture of inclusiveness and co-existence within the Indian subcontinent.

### Sikhism

Sikhism stresses on a prescribed code of conduct. Its teachings are based on the Guru Granth Sahib and the ten Gurus. Sikhism believes in human liberty, equality and fraternity. It emphasizes on universal brotherhood and universal peace and prosperity. It is committed to providing selfless service to entire humanity. Sikhism attaches importance to an optimistic and happy life. It focuses more on *sukh* (happiness) rather than *shanti* (peace). It believes that happiness is an active state where justice based on truth is present. On the other hand, peace is seen as the absence of conflict and therefore a passive state. Besides, force and oppression may be employed to achieve peace. Sikhism does not believe in total pacifism. Sometimes military action may have to be undertaken so as to promote justice. Guru Gobind Singh was in favour of military action but only if it was necessary. Moreover it had to be taken up only as the last resort.

### Akbar and the concept of *Sulh-i-kul*

Akbar had discussions and debates on religious issues with the representatives of various religions wherein he tried to understand things from the perspective of different religions. These debates 'convinced Akbar that all religions had elements of truth and that all of them led to the same Supreme Reality'. This belief led to the evolution of *Sulh-i-kul* (absolute peace) which referred to peace between all religions. *Sulh-i-kul* was an attempt by Akbar to reconcile the differences between different religions and their factions, which were a source of conflict between them. Moreover, from the administrative point of view, these conflicts prevented the Mughal state from taking a



neutral stance towards the various communities. Thus it was concluded that 'all religions were to be tolerated, but did not need to be followed'.



NOTES

### Gandhi's non-violent approach to peace

Gandhian non-violence is based on religious principles and sources drawn from Hindu, Buddhist and Jain scriptures and traditions. Gandhi was also influenced by the Sermon on the Mount, Henry David Thoreau's idea of civil disobedience, and Leo Tolstoy's perspectives on non-violence. The concept of *ahimsa* is based on the principle of unity of all life. In the Gandhian paradigm, non-violence or *ahimsa* is a strategy or a political technique as well as a way of life and a comprehensive programme of existence which included proper conduct, proper food, proper dress, vegetarianism, celibacy, sanitation, etc.

Apart from *ahimsa*, *satyagraha* is the other key concept in the Gandhian thought. The term *satyagraha* is a combination of the concepts of 'truth' (*satya*) and 'firm' (*agraha*) and literally means, 'standing firm for truth' or 'holding on to truth'. Gandhi referred to it as 'truth-force or soul-force'. These two concepts together are the active instruments of non-violent social change which would help build up a nonviolent social order.

The principle of *tapasya* or the 'willingness to suffer' is a core idea in the Gandhian conception of non-violence. The *satyagrahi* must be willing to endure self-suffering for a just cause and do so without inflicting violence in return. By enduring self-suffering and subjecting one's body to the process of self-purification, the *satyagrahi* can touch the conscience of the adversary and inspire a sense of justice in them. The adversary can thus be converted to see the truth.

*Satyagraha* is a weapon of the strong and cowards cannot practice it. Writing to this effect in *Young India* on 28 May 1924, Gandhi said: 'My nonviolence does not admit of running away from danger and leaving dear ones unprotected. Between violence and cowardly flight, I can only prefer violence to cowardice...Nonviolence is the summit of bravery'.

Gandhian *satyagraha* is thus based on the principles of non-violence, truth, justice and self-suffering. It is a weapon of the strong and there is no place for cowardice in it. Gandhi not only developed the major tenets of satyagraha but also practiced them in his lifetime in South Africa and in India. The influence of Gandhi and his thoughts is visible in the lives and actions of several individuals such as Martin Luther King and Nelson Mandela who struggled against injustice and exploitation, as well as on movements against oppression and violence such as that of Aung San Suu Kyi and her party National League for Democracy's struggle against the military junta of Myanmar.

## 4.5.2 Non-Indian Perspective

**Peace and Judaism:** The Hebrew word 'shalom' means 'peace', in simple terms. But peace here is not just absence of violence it is rather 'complete peace', which connotes contentment, wholeness, well-being and harmony. The peace strand does not occupy a prominent place in the Old Testament. But the Jewish prophet Isaiah and later Hebrew prophets were strong supporters of peace. According to Isaiah, war did not lead to success but it was rather 'a punishment to be inflicted on those who had failed God'.

NOTES

**Peace and Christianity:** Peace, love and non-violence are the basic foundations of Christianity. The Old Testament stated that 'swords shall be beaten into ploughshares and their spears into pruning hooks'. Besides, community of love was very much emphasized in early Christian social utopia. According to the New Testament, Jesus declared, 'My peace I give unto you'. The New Testament instructs believers to love even their enemy and tells them to return evil with good.

Christianity's major contribution to peace is the doctrine of pacifism. Pacifism simply means opposition to war and violence and commitment to peace. The term has a Latin origin and literally connotes 'peace-making'. It has been referred to in the Sermon on the Mount wherein Jesus espouses renunciation of arms and says that 'peacemakers' are blessed. The following extract from the Sermon on the Mount enunciates pacifism:

> You have heard that they were told, 'An eye for an eye and a tooth for a tooth'. But I tell you not to resist injury, but if anyone strikes you on your right cheek, turn the other to him too...You have heard that they were told, 'You must love your neighbour and hate your enemy'. But I tell you, love your enemies and pray for your persecutors.
>
> (Matthew 5:38-46)

The early Christian church largely promoted pacifism. Absolute pacifism was revived in the Middle Ages by groups like the Anabaptists. In contemporary times, small sects and 'peace churches' like the Society of Friends (popularly known as Quakers), the Mennonites and the Church of the Brethren adhere to these pacifist traditions. Pacifists not just oppose military policies but also resist conscription for wars as well as refuse to pay the proportion of tax that goes towards military spending. John Howard Yoder, a Mennonite theologian, insists that Christians should not indulge in violence against others especially of the kind which would involve taking another life. A. J. Muste, a pacifist, vociferously appealed people not to comply with military draft or conscription, terming it as 'holy obedience'.

**Peace and Islam:** The term 'Islam' is derived from the Arabic word 'salam' which simply means 'peace'. However, in holistic terms it means submission to God's will and abiding by His law. Peace and peacemaking are viewed as Godly acts in Islam. Peace needs to be established at all levels – the personal, social, national and international levels. It must be based on justice, which refers to equal protection, fair treatment and enjoyment of rights by all human beings.

**Chinese Conceptions of peace:** Lao-tzu was a Chinese philosopher in the sixth century B.C. He was the author of *Tao Te Ching*. *Tao* means 'the way' or 'the path', *Te* refers to 'strength' or 'virtue', and *Ching* means 'scripture' or 'laws'. *Tao Te Ching* can, thus be referred to as 'Book of the Way' or 'The Way and Its Power' or 'The Law of Virtue and Its Way'. This classic scripture deals with the art of living. Lao-tzu laid the foundation of Taoism which is mainly based on and influenced by the natural world. He used peaceful images from nature to convey his ideas – 'water' is soft but manages to cut over even rocks. Again 'wind' too is soft and supple yet leaves its mark on a hard substance like iron.

Lao-tzu's main concern was that individuals were not willing to follow the path or way of natural goodness. Individuals and their activities such as usage of military force were a blot on the natural world which was perfect otherwise. They, thus needed to return to nature. If people wanted to achieve peace and tranquillity, they were advised to do nothing (*wu-wei*). Here Lao-tzu did not mean 'nothing' in the literal sense—he in fact meant that people needed to follow the natural forces and shape their activities in accordance with them—not fight against the natural order. This would help in harnessing the powers of the universe.





NOTES

K'ung Fu-tzu's (popularly known as Confucius) thoughts, teachings and philosophy, referred to as Confucianism, have had a major imprint on Chinese society. His teachings and ideas were compiled in the *Analects*. For Confucius, 'the attainment of peace was the ultimate human goal and that peace came from social harmony and equilibrium'. His philosophy is based on 'Zen' which means empathy or 'loving others'. Empathy could be applied by using the Golden Rule: 'What you do not wish for yourself, do not do to others'. Apart from empathy, Confucius also emphasized on self-discipline. His main aim was to revive the traditional values and virtues of benevolence and ritual propriety in Chinese society. Loyalty to the family and respect of the elders was very important for Confucius. The family could in fact become the basis for an ideal government.

Both Taoism and Confucianism were distinct responses to prevailing social, political and philosophical conditions in China during the times of Lao-tzu and Confucius. However, there were basic differences in their core beliefs. Confucianism was mainly concerned with social relations, human society and human conduct while Taoism was more individualistic in character and drew inspiration from nature.

Mo-tzu was another renowned ancient Chinese philosopher. He was against war and an advocate of love. He said, 'Those who love others will also be loved in return. Do good to others and others will do good to you. Hate people and be hated by them. Hurt them and they will hurt you. What is hard about that'? Love for Mo-tzu was a 'universal human virtue and the highest earthy goal, yet one that is within the grasp of each of us'. He, thus propounded 'universal love' or 'impartial caring'. For Mo-tzu 'universal love' was not an ideal but rather something very practical. In 'universal love' what mattered was the 'will' or 'intention' to love as in reality it will not be practically possible to benefit everyone. When people care for everybody equally and love each other, it is beneficial to one and all.

Compared to Confucius, Mo-tzu did not lay emphasis on conforming to rituals but rather propounded self-reflection. Self-knowledge comes from reflecting on one's successes and failures in life. For this people should lead a life of self-restraint.

### 4.5.3 Theories of Peace

**Perpetual peace:** Immanuel Kant was a German philosopher who wrote the book *Perpetual Peace* published in 1795. Kant strongly argued for a world government. He saw the state as the main culprit in causing wars and the reason for this was anarchy or 'lawlessness'. But Kant also believed in the potential for human being to be rational. Cultural progress would make people use reason which in turn will make them act morally. Kant laid out three definitive articles for the realization of perpetual peace:

- 'The civil constitution of each state shall be republican'.
- 'The law of nations shall be founded on a federation of free states'.
- 'The rights of men, as citizens of the world, shall be limited to the conditions of universal hospitality'.

The republican constitution is based on democracy: freedom of men, equality of citizens and single common legislation for all subjects. Due to lack of laws, states

NOTES

injure one another by going to war. The solution is to form a federation of Free states and develop a framework of international rules by which relations between states will be governed. Here each state will submit itself to certain conditions but the right of each state will be guaranteed. The third and last article referred to the citizens of a country having the right to visit another country. Such people were not to be treated in a hostile manner. Thus Kant believed that peace could be achieved by clearly laying out the rights of sovereign states and preventing one state from interfering into the matters of another. Kant's ideas of perpetual peace had a major influence on democratic peace theory. However, the two are not one and the same.

**Democratic peace eheory:** The core of democratic peace theory is the idea that democratic states do not go to war against each other or rarely indulge in this act. However, the opposite of this is also true. Democratic states are likely to go to war against non-democracies. Thus the key idea here is that democracies are favourable to peace. However, David P. Barash and Charles P. Webel argue that 'the evidence is overwhelming that democracies are no more peaceful than other forms of government, although they are unlikely to go to war against each other'.

**Conservative theory of peace:** Though conservatives look favourably at war, they too have advocated perspectives on prevention of war and peace. Plato was of the view that war was unavoidable. So if city-states (of Athens) wanted to survive in the violent world, they needed to organize themselves hierarchically. Hobbes opined that those who wanted to avoid the war, where everyone was against everyone else ('the state of nature'), needed to impose on themselves an autocratic authority ('Leviathan').

Western conservative traditions are also in favour of exercising strong controls, in the form of laws and their strict implementation, over individual conduct so as to ensure peace. According to conservatives, war occurs because of two reasons: social order is unstable and aggression is inherent in human beings. If power is secured and exercised properly, there would be no wars except sometimes in situations when the 'international state system' needs to be adjusted. The concept of 'balance of power' and 'realpolitik' are contributions of the conservative theory of peace.

Edmund Burke was one of the prominent conservative thinkers. He emphasized on the importance of 'traditions'; the traditions that have been inherited from the past need to be respected. Thus, it was critical to preserve the existing institutional order. Basically, the conservatives were suspicious of democracy, did not have faith in the rationality of individuals and were in favour of social hierarchies.

**Liberal theory of peace:** The liberals believed in political and legal equality. Liberal thinkers like Adam Smith favoured free-market economy. Montesquieu advocated peace from an economic perspective. He was of the view that international trade and commerce would promote peace. In the nineteenth century, liberal reformers 'proposed institutionalized mechanisms that are necessary for the conquest of organized violence, namely inter-state war'. Liberals are thus opposed to war. With globalization, the liberal thought that more trade and interdependence of economies would lead to not just economic prosperity but also peace, has gained currency. However, anti-globalization campaigners do not agree with this.

**Leftist views on peace:** The leftist thinkers claim 'a strong association with world peace'. Mao Tse-tung, a leftist opined that they did not favour war and advocated its abolition. However, war could be abolished only through war. Thus organized violence or war is essential for ending social oppression and class violence. Marx,





NOTES

Lenin, and Mao, all are in favour of using revolutionary violence so as to achieve the social goals of emancipation of workers, establishment of socialism etc.

Socialists are of the opinion that peace is possible only in a classless society. The main reason for violence is economic inequality and social injustice perpetuated by authoritarian political regimes. Only a handful of people (capitalists) control economic resources and exercise power; these people exploit the majority.

The world can get liberated from this exploitation by building solidarities among human beings, irrespective of their nationality.

**Feminist theory of peace:** The main focus of feminist theories is on achieving gender equality. Feminists recognize that there are multiple realities. Their key propositions are based on values. The feminists believe that in comparison to men, women are uniquely affected by war and violent conflict as their bodies become the marker for expression of revenge and hatred. On the other hand, due to their nurturing roles, they are seen as natural peacemakers and peace-builders. Besides, the nurturing role also makes them see alternative ways of dealing with problems.

There is violence and domination in the society because it is organized in a hierarchical manner and masculine values are given more preference here. Peace can be achieved by removing violence in the public as well as the private spheres. Feminists are thus against war, militarism and other forms of organized state violence and in favour of disarmament.

Feminists also oppose other forms of oppression and violence such as racism, ethnocentrism, social and economic inequality, authoritarianism, ecological destruction, etc. The alternatives to these forms of violence must be based on equality – equal relations between men and women, equality among races and ethnicities, social justice, economic equity, democracy, and equal distribution of resources. Feminists stress that no socio-economic initiative can be successful without the participation of women.

According to the feminist view, the state-centric or national security paradigm gives more preference to the 'defence of sovereignty' and the protection of the borders of a state. The national security perspective is a manifestation of patriarchal norms. On the other hand, feminist notions of security tend to be inclusive rather than exclusive; all people irrespective of their nationality, race, religion and gender would be included. Secondly, as opposed to the national security perspective, feminists propose a human security paradigm where the focus is on the protection of life and enhancement of the quality of life. This can be done by fulfilling basic human needs and ensuring safety in both private and social relationships.

## 4.5.4 Approaches to Peace

**Positive and negative peace:** Peace is also viewed as positive and negative. Negative peace means the absence of organized state or military violence or war. This is the realist theory or realpolitik perspective of peace. Raymond Aron views peace as a state where rivalry and opposition between the political units has been 'more or less' suspended. This is symptomatic of negative peace. The alternative to negative peace is positive peace. Positive peace was propounded by peace researchers like Johan Galtung. Positive peace 'refers to a social condition in which exploitation is minimized or eliminated, and in which there is neither overt violence nor the more subtle phenomenon of underlying structural violence'. Thus positive peace is not just about the absence of war but rather the absence of overt as well as structural violence.

NOTES

Structural violence denies people their rights and their ability to satisfy basic human needs, e.g., economic well-being, cultural identity, socio-political rights and freedoms. This kind of violence is very widespread and visible but remains unrecognized.

Peacemaking and peacekeeping activities fall within the domain of negative peace while peace-building activities are indicative of positive peace. Negative peace believes in maintaining the status quo while positive peace stresses on the creation of new structures that are based on equity and equality and that does not discriminate between communities, groups and individuals. Positive peace can assume the form of justice, cooperation, harmony, equity, etc.

There is disagreement about the means for achieving peace. Some thinkers justify the usage of violence to achieve peace. In 1787, Thomas Jefferson wrote that 'the three of liberty must be refreshed from time to time with the blood of patriots and tyrants'. But others do not agree with it. Quincy Wright says that violence as a means to attain the end of peace cannot be justified under any circumstances.

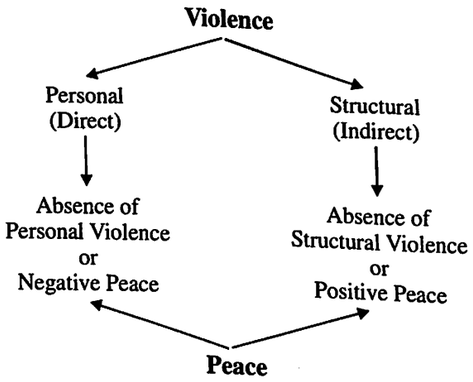



*Fig. 4.4 Positive and Negative Peace*

**Justpeace perspective:** The conflict transformation school of thought emphasizes on justpeace, which is the final goal of conflict transformation and peace-building. Justpeace includes the containment and reduction of not just overt conflict and overt violence but also the transformation, if not elimination, of structural conflict and structural violence. The concept of justpeace contends that when justice is pursued violently it further adds to injustice. Thus peace without justice will not be sustainable. When working towards justpeace, restorative justice should be preferred over retributive justice.

**Social justice and peace:** There is a general agreement that 'just society' is desirable but there is no consensus about what constitutes 'just society'. Capitalist countries tend to give more importance to economic freedom and civil and political rights while socialist countries stress more on economic and social security. Social injustices cause war and lead to structural violence. At the international level, developed countries of the world enjoy power, wealth, status, affluence, access to resources, etc. They would like the present state of affairs to continue. On the other hand, majority of the people residing in developing and underdeveloped countries have to struggle hard for even two square meals a day. For the latter, there is no social justice and they would like major social and structural changes. Establishing social justice need not necessarily mean the end of wars but social and economic development would definitely lead to less structural violence.





NOTES

**Human rights and peace:** David P. Barash says, 'Human rights and peace are inextricably connected'.

He specifically describes four such connections:

- Peace is denied when human rights are denied. When fundamental human rights are violated even without an armed conflict, there can be no peace.
- The way in which a state treats its own population is reflected in its treatment of other nations as well.
- When human rights are denied in a country, it 'can provoke breaches of the peace, if other states become involved'. This is popularly referred to as humanitarian intervention and is a legally sanctioned part of international law. However, it is also true that in the name of humanitarian intervention, states have often violated human rights of the citizens of the country where they intervened.
- Violation of the right to self-determination, a widely recognized human right, has often led to violent conflict and war. Thus it is quite likely that the pursuit of human rights can lead more to violence than to peace.

Barash concludes that 'the connection between human rights and peace is complex and multi-faceted'.

In spite of the complex connection between human rights and peace, it cannot be denied that respect for human rights can contribute to positive peace. They can also 'enhance positive conditions for human development'. Civil and political rights provide protection to individuals against the state. Economic and cultural rights can be enjoyed only when there is social justice. Besides, human rights are also essential for the satisfaction of basic human needs.

Human rights and human development are interdependent. Civil and political rights cannot be separated from socio-cultural and economic rights. On the other hand, development 'must be based on human rights principles of non-discrimination, equity, social justice, self-sufficiency and solidarity'. An authoritarian regime may deny equity and equal opportunities by discriminating against certain communities and groups; this will hamper their process of development. If structural violence is not attended to, the marginalized sections of the society would continue to suffer. These conflicts when left unaddressed could lead to a violent conflict.

**Ecology and peace:** Industrialization has degraded the environment and threatened the quality of life in several parts of the planet. The adverse effects of environmental degradation are now being felt all over the world. The ecosystem that supports life on earth is in danger due to 'global warming, ozone depletion, deforestation, distortion of bio-diversity with the elimination of species, exploitative use of land, pollution of the sea and shortage of water'. Common resources such as water and air have been polluted for narrow selfish ends guided by greed. Increasing population is further adding to the problem. The earth cannot support unsustainable economic growth as its limited resources are getting depleted at a fast pace. Due to rapid population growth, the earth is unable to renew its resources. Moreover, the degrading environmental conditions are likely to increase poverty and inequality, which in turn can provoke violent conflict.

Since the environment is an interrelated system, the ill-effects of problems in one part of the world reverberate in other parts. Environmental degradation is no

NOTES

longer a national security issue; these concerns need to be looked at as a common security threat where the cooperation of one and all would be needed for the betterment of the situation.

**Economy and peace:** There can be no peace in the world when there is a huge gap between the rich and the poor. Globalization is believed to have widened this gap. Poverty need not necessarily lead to war directly but it is not amenable to peace either. The causes for poverty may vary from country to country and even within the various regions of a country – some may lack resources, some may be poor because of government policies and the ideologies professed by their governments, some may be facing the ill-effects of environmental degradation, some may be debt ridden and yet some others may be having huge populations.

Peace in this scenario would essentially mean a betterment of the social and economic situation of the poor. This would require socio-economic development and other measures. However, the rich (both countries and people) prefer the status quo and are not interested in the redistribution of resources and wealth.

**Holistic conceptions of peace:** In contemporary times, increasingly there is an emphasis on holistic conceptions of peace—peace between different levels is interlinked—individual peace or inner peace is directly related to peace in the wider environment in which the individual inhabits. Holistic perspectives are focused on the direct connections between humans and their 'bioenvironmental systems'. These holistic views are mostly in harmony with those expressed in religious notions of peace.

General systems theory and their proponents such as biologist Ludwig von Bertalanffy also argue that self-organizing systems are essentially connected to larger systems of the universe; the creation and sustenance of the former is largely determined by the interplay of dynamics in the latter. This is evident in the human greed to control the environment which has led to ecological destruction, threatening life support systems. These human activities end up providing material and physical security and comfort to only few at the cost of others. The human 'self' is not separate from other species and the natural world to which they have caused irreparable damage. Thus holistic notions of peace are based on ideas that link 'the ideal of the human spirit to the harmony between different components of the earth system and even universe'.

### 4.5.5 Concept of Violence

Several people tend to equate conflict with violence. However, conflict and violence is not the same thing; violence is an expression of conflict. All conflicts need not necessarily lead to violence. As human beings we have a *choice* of how we wish to respond to conflict or *express* it–violently or non-violently. Gandhi, Dalai Lama and many others chose to express conflicts non-violently. Conflicts cannot be avoided but violence can and should be avoided. Besides, if we want to address violence, we will have to understand *why* people opt for it?

Since not all conflicts turn violent, what are the factors that make particular conflicts violent? Conflicts become violent when there are no or inadequate channels for disagreement and dialogue. It can also become violent when dissenting voices are either not heard or suppressed and when deeply held grievances are not addressed. Conflict is likely to become violent when there is fear and instability in the community and society.

**Check Your Progress**

10. **State whether True/False:**
    (a) Johan Galtung propagates negative peace.
    (b) Democratic states do not go to war against each other.
11. **Fill in the blanks:**
    (a) Kant wrote the book ..... .
    (b) Peacemaking and peacekeeping activities fall within the domain of .....peace.
12. **Multiple choice questions:**
    (a) Who among the following is not a leftist thinker?
        (i) Hobbes
        (ii) Lenin
        (iii) Mao
        (iv) Marx
    (b) Who among the following believed that peace is possible only in a classless society?
        (i) Conservatives
        (ii) Democrats
        (iii) Leftists
        (iv) Liberals





NOTES

For Johan Galtung (Norwegian sociologist and the principal founder of peace and conflict studies), violence is something that harms or hurts the body, mind and spirit. Going by this definition, if you want to go out and play but your parents want you to study and force you to comply, they are committing violence on you. Galtung's definition thus takes a very broad conception of violence. People could be violent in their actions, or in words or in their attitudes. Even structures or systems can be violent. Thus actions, words, attitudes, and structures that lead to physical, psychological, social and environmental damage—one or a combination of these—is violence. Violence prevents human beings from reaching their full human potential.

#### Types of Violence

Johan Galtung classifies violence into three kinds, depending on its operation—direct, structural and cultural. Most commonly, when we think of violence, the image that comes to us is that of dead people, blood splattered all over the place, people crying for help, guns, and bombs. This type of violence is the most feared as here the main intention is to cause direct harm e.g. killing with a gun. This is the overt or direct kind of violence and it could consist of both verbal and non-verbal strikes.

Systems, structures and institutions can also cause violence. Certain structures could favour one community or group while at the same time discriminate against and deprive other communities or groups of their rights and their ability to satisfy their basic human needs (for economic resources, safety, respect, participation, identity, culture, religion) to the point of threatening their lives and livelihoods e.g. slavery. This is known as structural or institutional or systemic violence. Moreover, overt violence in most cases is a response to structural violence. Structural violence is of two kinds–vertical and horizontal. Vertical structural violence takes place when structures and systems repress people politically, exploit them economically and alienate them culturally. When people are repressed politically, their need for freedom is violated; when they are exploited economically, their need for well-being is violated; and when they are alienated culturally, their need for identity is violated. In horizontal structural violence, structures deny people the need for identity by pressurising people who want to live together to drift apart and those who wish to live apart to be together. Structural violence produces humiliation, shame and despair among the victims and in some cases can traumatize them for life.

Direct and structural violence are visible but cultural violence is not. Yet, it is the most dangerous among the three forms as it is *inside* all of us. Structures are an external thing but cultures are internal; they determine our identity and nourish us through religion, language and ideology. In cultural violence, the intention is to harm or even to kill, not in reality but symbolically through words and images. Cultural violence is thus used to justify and legitimize direct and structural violence. For example, certain cultures describe war or violence as 'good', killing as 'right', even 'sacred'. Yet another example is how cultures propagate and enforce different norms and rules for boys and girls. While boys are allowed all the freedom in the world, restrictions are imposed on girls from a very young age and all in the name of protecting their honour and dignity. Certain cultures thus ensure that boys and girls are raised differently.

**Check Your Progress**

13. **State whether True/False:**
    (a) All conflicts lead inevitably to violence.
    (b) Galtung's definition of violence takes a very narrow conception of violence.
14. **Fill in the blanks:**
    (a) Johan Galtung classifies violence into _____ kinds.
    (b) Direct and structural violence are visible but _____ violence is not.

NOTES

## 4.6 PEACE EDUCATION: NATURE, IMPORTANCE AND OBJECTIVES

Having looked at the culture of peace, the question now arises, how do we build it? A probable answer to this question is found in the Preamble of the UNESCO constitution which says: 'Since wars begin in the minds of men, it is in the minds of men that the defences of peace must be constructed'. The UNESCO Culture of Peace elucidates on the mechanism or means through which peace can be constructed in the minds of human beings: 'For peace and non-violence to prevail, we need to foster a culture of peace through education by revising the educational curricula to promote qualitative values, attitudes and behaviours of a culture of peace, including peaceful conflict resolution, dialogue, consensus building and active non-violence'.

Fostering a culture of peace through education is the first of the eight action areas laid out by the 1999 United Nations Declaration and Programme of Action on a Culture of Peace [resolution A/53/243]. This action area highlights the crucial role that institutions of formal education, i.e., the school, can play in fostering a culture of peace. However, education in culture of peace is not only about formal education; it includes non-formal education as well. Non-formal education is education that takes place outside the classroom and the school. Education—both formal and non-formal—needs to focus on building a culture of peace and non-violence. Education must empower children to become active participants in their future. The UNESCO stresses that the 'culture of peace through education' is the base upon which the other seven action areas can be built.

Outlining the composition of education, Daniel Webster said, 'Knowledge does not comprise all which is contained in the large term of education. The feelings are to be disciplined, the passions are to be restrained; true and worthy motives are to be inspired; a profound religious feeling is to be instilled, and pure morality inculcated under all circumstances. All this is comprised in education'. Gandhi viewed education as that which is relevant and meaningful to the lives of human beings. He felt that education should 'make of us men' and 'enable us to do our duty'. For Gandhi, education was not confined to the 3Rs as these were not practically relevant in day to day lives of human beings. The real aim of education was to build characters. Much of the education today assumes that violence and injustice are a fact of life. Many even glorify wars leaving people with the assumption that we do not have choices. But real education aims to help people to see that we do have choices.

Education can positively contribute to building a culture of peace. Education includes not just higher education but also education at the primary and secondary level. In fact, it is better to start early as far as constructing the defenses of peace in the minds of men are concerned. 'Peace Studies' or 'Peace and Conflict Studies' has been established as an independent discipline worldwide and universities run specialized courses on them. These courses concentrate on the analysis of conflicts at different levels and also focus on how peace can be built.

Peace education in UNICEF refers to the process of promoting the knowledge, skills, attitudes and values needed to bring about behavior changes that will enable children, youth and adults to prevent conflict and violence, both overt and structural, to resolve conflict peacefully; and to create the conditions conducive to peace, whether at an intrapersonal, interpersonal, intergroup, national or international level. Peace





NOTES

education must address the prevention and resolution of all forms of conflict and violence, whether overt or structural, from the interpersonal level to the societal and global level.

### 4.6.1 Objectives and Dimensions of Peace Education

Peace education concentrates on changing attitudes and behaviour so as to achieve cooperation and encourage nonviolent problem-solving. It makes people aware of their biases, prejudices and stereotypes. Education has a normative component and most definitions of peace education also touch on the normative aspect. Peace education can take place in formal as well as non-formal relaxed settings (outside the classroom). Efforts to introduce peace education in the school curriculum have been undertaken in several parts of the world.

Johan Galtung compares peace to health and says that just wanting health is not enough; one would need knowledge and skills as well. The same is the case with peace. 'Peace education should fill the gap between wanting and acting'. However, the field of peace education is not free from controversies for there is disagreement with regard to how to obtain peace and what would be its ultimate goal. It is thus a 'contested concept'. Galtung opines that peace education can provide medium and long-term perspectives. In the medium term, it can prepare the foundation wherein the seeds for peace would be planted. In the long term, it can prevent violent conflicts from taking place as people would have gained the capacity and the skills to deal with conflicts non-violently and creatively.

Birgit Brock-Utne defines peace education as 'the social process through which peace...is achieved...includes the practicing of equality of rights and equal power-sharing for every member of a given community...further includes the learning of skills of non-violent conflict resolution...also includes respect for human rights.' However, according to her it is very difficult to treat peace education 'in a scholarly manner because the term is open to so many different political interpretations. For political reasons—to reach consensus on a definition of peace education to be used in the international community or in the official school curriculum guidelines— the term is intentionally made to be open to various interpretations and to accommodate various viewpoints.' Since the field is too wide open it is 'unwieldy' as well. That is why there have been attempts to divide it into smaller manageable areas or 'subfields' like development education, human rights education, disarmament education, etc. Brock-Utne sees peace education as 'the generic umbrella' for these other related areas. However, there are debates on whether peace education is a broader concept that also includes human rights education or whether human rights education is the 'approach' through which peace education should be looked at. There are diverse views on this debate.

Betty Reardon, an American peace education expert is of the view that what would specifically go into peace education is neither clearly laid out nor is it defined in terms of what it would be limited to. In her research, she found out that peace education in the United States focused on nine areas all of which were either focused on cognitive aspects or on building attitudes or behaviour: conflict resolution, cooperation, global environment, human rights, multicultural understanding, non-violence, social justice, global environment and world resources. For Reardon, the objective of peace education is to 'promote the development of authentic planetary consciousness that will enable us to function as global citizens and to transform the

NOTES

present human condition by changing social structures and the patterns of thought that have created it.'

Its core is the 'control, reduction and elimination' of violence.

Birgit Brock-Utne distinguishes between education *about* peace and education *for* peace. Education *about* peace is a formal approach to peace education while education *for* peace is a broader approach. There is also a difference in the way the two see 'education' – the former sees education as the 'limited, formal learning of matter, acquisition of knowledge' while the latter is about 'informal learning of attitudes, values and behaviour.' Depending on one's requirements, education *for* peace programmes can be either narrow or wide. When it's broad, it has the long-term aim of promoting positive peace; when narrow, it focuses on addressing or preventing a specific conflict. However, there is no dichotomy between the narrow and the wider component; in practice they are closely inter-linked. Besides, both have a normative approach. Education *for* peace can be undertaken in societies which are facing violent conflicts as well as in societies where there is a likelihood of violent conflict breaking out. Both adults and children can be a part of education *for* peace.

The goal of education *for* peace is the development of 'the critical and analytical mind' and 'cooperative way of working'. However, this is easier said than done in the settings of a formal school system, for structurally it is geared towards and promotes competition, achievements of the individual and getting grades.

Pedagogy is a very critical aspect of peace education. Paulo Freire's work, *Pedagogy of the Oppressed*, written in 1968, lays out the framework in this regard. According to Freire, the modern education system is a hierarchical setup which treats students like empty vessels, where teachers need to deposit knowledge. He terms this as the 'banking' approach to education. This process ends up dehumanizing both the teacher and the students. Here the teacher is the 'subject' and the students are mere 'objects' and knowledge is devoid of reality. Freire contends that students need to be seen as co-creator of knowledge and the aim of education should be *conscientization*, where education is a medium of consciously shaping individuals and the society. This is to be done through dialogue or the dialogical method.

### 4.6.2 Education for Peace in India

In India, peace education programmes have traditionally been concerned with promoting certain core values. Different commissions and committees recommended the incorporation of value education at all levels. Consequently, the National Curriculum Frameworks of 1975, 1988 and 2000 adopted a value-oriented approach to integrate peace concerns in education. A major shift in this approach was witnessed in the National Curriculum Framework (NCF) of 2005 which felt that value education gets subsumed in peace education. Moreover, peace education and value education are not identical in nature and content. Peace education can help better understand values and also help in their internalization. Without such a framework, values do not get integrated with the learning process. Peace education can thus provide the context for value education and also facilitate its operation. Moreover, there is a growing realization in the world today that children should be educated in the art of peaceful living in the wake of alarming increase in violence in school life. Gandhi too had said: 'If we are to teach real peace in the world we shall have to begin with children.' As a result, the need for integrating peace concepts, attitudes, values and behavioural skills into the





NOTES

school curriculum was felt. Thus, out of the twenty-one focus groups constituted in the context of NCF 2005, Education for Peace emerged as one of the thrust areas.

National Curriculum Framework of 2005 went beyond peace education to emphasize on 'education for peace'. Education for peace is a wider concept and peace education is one part of it. In the former, peace is the vision through which the process of education is shaped. Here the whole educational process is geared towards the creation of a better world and the promotion of a culture of peace. Education for Peace is education for life; it is not about training for a career or a livelihood. In education for peace learning has to be a meaningful and joyful experience and not a cumbersome and burdensome process.

Education for peace aims to train children to become responsible adults so that they can live harmoniously with others as well as the environment. This would entail orienting children towards peace, endowing them with non-violent attitudes, behaviour and values. It also consists of developing attitudes of self-respect, tolerance, empathy, justice and fairness. Besides, human rights education, environmental education, conflict resolution education, development education, cooperation, social responsibility, democracy and respect for cultural diversity will be a part of Education for peace. In the Indian context, education for peace could also include inculcation of the idea and goal of social justice, propagation of a secular and democratic culture, and promotion of national integration, eventually making these a part and parcel of the lives of its citizens. It is pertinent to emphasize here that in several settings peace education and education for peace are used interchangeably and they mean one and the same thing.

Peace when taught in a formal setting like schools need not be confined solely to one subject such as conflict resolution or conflict management or be taught just as a part of social science and humanities like history or political science or civics. It can be and should be in-built and integrated into different subjects. Education for peace, thus is not envisaged as a separate subject that would further augment curriculum load but a perspective from which all subjects are to be taught.

The present state of educational affairs in the schools of India is far from satisfactory. It promotes competition and rote learning and is based on hierarchical transfer of knowledge. The child does not experience any joy in learning; education thus becomes a burden. Besides, it hardly pays attention to nurturing the child into a holistic being. Teachers are poorly trained. They pass their prejudices and biases on to the students. As a result we see several forms of violence in schools today – bullying, beating, ragging, killing (students committing violence on others); students committing suicides (violence on self), corporal punishment (violence committed on students by others such as teachers), etc. Schools which are meant to be nurseries of peace end up becoming a transmission point for violence. Thus, a total paradigm shift is required in the transaction of education – it should focus on learning and not be confined to literal training.

Given the dismal scenario, implementation of education for peace would require engaging with various issues and concerns and addressing them constructively such as training of teachers, textbook writing, reducing the curriculum load, coming up with evaluation methods that promote cooperation rather than competition, involving the parents and the community at large in teaching-learning processes, etc.

The role of the teacher assumes significance in contextualizing Education for Peace in schools. Teachers are role models for young impressionable minds. They not

NOTES

only facilitate the teaching-learning process but also influence the psychological, emotional and spiritual growth of the children by creating an enabling environment. This requires proper training in the content and pedagogy of Education for Peace. The NCF 2005 too emphasized on proper training and development of skills among teachers so that they could contribute to building a culture of peace among their students and the school and community at large.

**Check Your Progress**

15. **State whether True/False:**
    (a) The Four Noble Truths were enunciated by Gautama Buddha.
    (b) Kabir and Nanak were Sufis.
16. **Fill in the blanks:**
    (a) Ahimsa and .....are the two basic tenets of Jainism.
    (b) ..... enunciated the ideology of the Dhamma.
17. **Multiple choice questions:**
    (a) Who among the following convinced Arjuna, the Pandava warrior to fight by telling him that it is his duty to do so?
        (i) Ashoka
        (ii) Akbar
        (iii) Gandhi
        (iv) Krishna
    (b) Which among the following does not belong to the Anabaptist traditions?
        (i) Church of the Brethren
        (ii) Jews
        (iii) Quakers
        (iv) Mennonites

## 4.7 APPROACHES OF CONFLICT RESOLUTION AND EDUCATION FOR CULTURE OF PEACE AND NON-VIOLENCE

Legal means of conflict resolution refers to the laws that could help resolve conflicts non-violently. Laws aim to protect the society and its individuals, establish rules for behaviour and governance, maintain social order and ensure justice. Most of all, they are meant to guide relations between states as well as between citizens of states by specifying what is permitted or legal and what is not allowed. Laws have the potential to limit and prevent violent conflicts and wars and promote a peaceful world. However, laws by themselves cannot do anything as firstly, no law is perfect and secondly, because laws are not perfectly implemented or executed.

Law, both international and municipal, provide the legal means for conflict resolution. International law or the 'law of nations' deals with interactions between states and provides rules regarding how to conduct international interaction while municipal law concerns the national and domestic law of a state.

### International Law

The main idea behind the emergence of international law was to manage conflict among states as it was felt that laws would bring in order and lessen violent conflict. However, just the presence of laws does not necessarily mean that it would be easy to resolve conflicts. Laws can be a point of contention as well; the powerful developed countries would not want to be constrained by them while the less powerful developing and underdeveloped countries feel that they never had a voice in the process of making these laws. In any case, all countries of the world hardly agree on all international laws. Besides, several times municipal laws contradict international laws. Cultural differences between countries make the interpretation and implementation of international laws really difficult.

The beginning of international law can be traced to the Treaty of Westphalia, 1648 which stressed upon the sovereign equality of states. However, it was only in 1783 that the term 'international law' emerged for the first time in Jeremy Benthem's *Principles of International Law*. In the eighteenth and nineteenth century, the rules of war (*jus ad bellum* and *jus in bello*) were codified in the Geneva Conventions. After the end of the First World War, the League of Nations came into being and made some unsuccessful attempts to prohibit war. The Kellogg-Briand Pact of 1928 was the first crucial initiative which went beyond the laws of war. It criticized 'recourse to war for the solution of international controversies.' In 1945, the United Nations (UN) was set up which became the source of international law. The UN Charter not only defined the legal use of force but its Chapter VI stressed on peaceful settlement of disputes though a variety of mechanisms which include negotiation, mediation, conciliation, inquiry, arbitration and judicial settlement. Besides, the UN became the 'negotiating venue' for creating new international laws.

There are four major sources of international laws: classical writing, custom, treaties and rulings of international courts. Apart from these, international legal scholars also contribute to international laws. Their opinion on technical issues could lead to the creation of new laws. Moreover, general legal principles which are part of the municipal law of several states could also become a part of the body of international law.

Various classical writings had sparks of international law in them. Francisco de Victoria, a Spanish legal scholar of the sixteenth century, believed that war had to be 'morally justifiable, and could not simply be fought over differences of religion or for the glory of a ruler.' But among classical writings, it was Hugo Grotius' work in the year 1625, *On the Law of War and* Power that left its influence the most on international law. Grotius opined that there was a 'natural law' which was beyond nations as all humanity belonged to the same community. He strongly advocated state sovereignty and therefore non-interference by states in the internal affairs of other states. Thus 'the Grotian tradition...derives the legitimacy of international law from the legitimacy of states themselves. But it goes further in seeking to derive principles whereby the behaviour of one state toward another can be regulated...'

Several customary practices that developed over a period of time have been codified in international law. Yet, 'custom is one of the most important and least appreciated sources of international law.' An example of customary law would be diplomats enjoying immunity from getting arrested or detained when working in another country.

The third source of law is international agreements and treaties between states. States have signed treaties and agreements with other states covering areas like ending wars, putting restrictions on each other as to the actions permitted during wars, settling boundary disputes, navigation rights, fishing rights, etc. These treaties are a part of international law. In majority of cases, these treaties have been honoured by states as violating agreements and not honouring treaty obligations would lead to a loss of face. Moreover, a state that gets labelled as a 'treaty-breaker' may have difficulty in establishing relationships with other states in the future. Most of these international treaties and agreements laid the foundation for several intergovernmental and multilateral organizations, which also in turn became a source of international law.

International law also provides for a court to hear disputed cases. The legal initiatives to change the world and make it a better place led to the establishment of the Permanent Court of International Justice (PCIJ) in The Hague in 1920. It was then a part of the League of Nations. PCIJ 'epitomized...logic of world peace through law.' The PCIJ was reconstituted as the International Court of Justice (ICJ) in 1946. ICJ will be dealt with separately slightly later in the chapter.

The main difference between international law and municipal law is that the former cannot be enforced while in the latter there is a government to enforce the laws. That is why several people go to the extent of not even considering international law as 'law'. Yet some others argue that why not translate international laws into municipal laws where they can be better enforced as national governments have the wherewithal to do so.

Lack of enforcement provisions is a major problem in international law as 'individual states insist on a kind of latitude that they would never allow their own

NOTES

citizens.' The 'latitude' that is being referred to here is state sovereignty and the state-centric system. Individuals take recourse to state sovereignty to escape the provisions of international law. The protection of human rights which is one of the important aims of international law also puts limitations on state sovereignty, for on occasions force has been used to protect them. In the late 1990s, state sovereignty and principles of human rights were in conflict with each other in the Balkans crisis wherein Yugoslavia opposed Western threats by taking recourse to the former while the North Atlantic Treaty Organisation (NATO) countries undertook 'humanitarian intervention' in 1999 on the pretext of protecting the latter. David P. Barash thus concludes that 'state sovereignty continues to reign, although a semblance of international law is generally invoked as well. States have been especially hesitant...to circumscribe their day-to-today authority.'

In spite of these challenges, international law is most often followed, largely because a major part of the laws are based on customs and secondly because the big powers back them. The latter however do so mainly because they see it in their interest.

## Conflict Resolution in International Law

Malcolm N. Shaw says, 'International law has historically been regarded by the international community primarily as a means to ensure the establishment and preservation of world peace.' Given this context, the procedures available within international law to resolve conflicts peacefully fall into two categories: diplomatic procedures and adjudication. Diplomatic procedures refer to endeavours and efforts made either by opposing parties or with the help of other entities, to resolve the dispute by making use of the process of discussion and fact-finding such as negotiation, good offices, mediation, inquiry and conciliation. Adjudication, on the other hand, entails the involvement of a disinterested third party, who determines the legal and factual issues of the dispute through the means of either arbitration or through judicial decisions.

In the course of conflict resolution, a range of methods can be used by contending states in a particular dispute; the process need not be limited to only one method. Differences between states can either pertain to legal conflicts and/or political disagreements that may be peripheral. It is important to point out here that states are under no obligation to make efforts to resolve their disputes even though the international law and the United Nations Charter instructs them to do so. Secondly, the methods used to settle disputes can be operationalized only when the states give their consent to that effect.

But what constitutes 'dispute'? 'Dispute' as referred to by the PCJI in the *Mavrommatis Palestine Concessions (Jurisdiction)* case constitutes 'a disagreement over a point of law or fact, a conflict of legal views or of interests between two persons.' Disputes are sometimes classified into justiciable and non-justiciable or legal and political disputes. However, this sort of a distinction may not be practically applicable as disputes generally tend to involve political considerations and disagreements over political issues may get resolved through judicial decisions. Moreover, categorization of a dispute into legal or political is a matter of perception and would depend on how concerned states choose to term it. However, some differences between the legal and political means to resolving conflicts can be established. Legal means to conflict resolution refers to 'the provisions of law as they stand at that point, irrespective of any reforming tendencies the particular court may





NOTES

have, while the political techniques of settlement are not so restricted.' Besides, it is also possible that political and legal organs deal with the facets of the 'same basic situation'. Political means of conflict resolution include the measures applied by the United Nations. Here the focus will be on the legal means of conflict resolution as established in International Law.

The legal means for conflict resolution have been elaborated upon in the 1970 Declaration on Principles of International Law Concerning Friendly Relations and Cooperation among States in the following manner:

> 'States shall accordingly seek early and just settlement of their international disputes by negotiation, inquiry, mediation, conciliation, arbitration, judicial settlement, resort to regional agencies or arrangements or other peaceful means of their choice'.

The above methods have also been referred to in Article 33(1) of the UN Charter. However, these have been mentioned in the context of the continuance of such disputes that are likely to endanger international peace and security. The methods can be used in any order but no force is to be used nor is any threat to be issued to that effect. Moreover, states can choose to use any method that they want to adopt in a particular context. Regional instruments such as the American Treaty on Pacific Settlement, 1948 (the Pact of Bogota); the European Convention for the Peaceful Settlement of Disputes, 1957 also leave it to the states to decide on the means of conflict resolution that they want to adopt. If one method fails to resolve a dispute, states can take recourse to another. In spite of the best efforts, if the dispute does not get resolved and it is likely to harm international peace and security, the parties '*shall* refer it to the Security Council.'

### Negotiation

Negotiation is a simple, active and the 'most utilized form' of conflict resolution. In negotiation, contending parties discuss their differences directly with each other, without the involvement of a third party; the overall aim is reconciliation of differences. If reconciliation does not happen due to various reasons, the idea is to at least understand each other's positions. Normally, negotiation becomes 'the precursor' for other settlement procedures such as mediation, as parties use it initially to clarify disagreements. British academic Malcolm N. Shaw Q.C. says, 'Negotiations are the most satisfactory means to resolve disputes since the parties are so directly engaged.'

Negotiations depend to a certain degree on opposing parties showing some flexibility, sensitivity and mutual goodwill towards the other. As a result, they do not always succeed. Lack of trust in each other is likely to complicate the negotiation process, making resolution difficult.

Some bilateral and multilateral agreements instruct parties to enter into negotiation as a matter of 'duty', for instance, Article 283(1) of the Convention on the Law of the Sea, 1982 provides that in case of a dispute regarding 'interpretation or application' of the Convention, 'the parties to the dispute shall proceed expeditiously to an exchange of views regarding its settlement by negotiation or other peaceful means.' When negotiation is obligatory, it is likely to entail the pursuance of negotiation with the aim of concluding an agreement. In the *North Sea Continental Shelf* cases, the ICJ held that:

> 'The parties are under an obligation to enter into negotiations with a view to arriving at an agreement, and not merely go through a formal process of

NOTES

negotiation...they are under an obligation so to conduct themselves that the negotiations are meaningful, which will not be the case when either of them insists upon its own position without contemplating any modification of it.'

However, in the *German External Debts* case, the ICJ held that when parties agreed to negotiate with each other, they were under no obligation to reach an agreement but they had to make 'serious efforts' to do so. In the *Lax Lanoux* arbitration, it was stated that negotiations had to be conducted as per 'the rules of good faith' and were not meant to be 'mere formalities'. If discussions were broken off unjustly or if there were 'unusual delays' or when parties systematically refused to consider proposals – these were taken to be violation of 'the rules of good faith'.

Article 33 of the UN Charter says that in cases where disputes by their continuance are likely to imperil international peace and security, states should first try to seek resolution of disputes via negotiation, mediation or inquiry and only when these mechanisms fail that they should take recourse to other forms.

## Good offices and mediation

The mechanisms of good offices and mediation make use of a third party. This third party could be either 'an individual or individuals, a state or group of states or an international organisation.' The aim of the third parties is to 'encourage' the opposing parties to reach some sort of an agreement and terminate the conflict. They are persuaded to make decisions with regard to the agreement on their own without the same being imposed by the third party which is generally the case in arbitration and adjudication.

In good offices, the third party tries to 'influence' the contending parties to negotiate with each other. Mediation on the other hand involves 'active participation' of the mediator in the process of negotiation. It is difficult to clearly distinguish between good offices and mediation several times as the two 'tend to merge'. The good offices mechanism was utilized by the USSR in 1965 when it helped India and Pakistan to resolve their dispute. France played a similar role between the US and North Vietnamese while 'encouraging' them to start their negotiations early on in the 1970s. On several occasions, the United Nations (UN) Secretary General makes use of his good offices to help the opposing parties to come to an agreement. This was specifically done in the case of Afghanistan. The Geneva Agreements of 1988, pertaining to Afghanistan, 'noted that a representative of the Secretary-General would lend his good offices to the parties.'

The role of the mediator is much more dynamic. They try to ease the tension between the parties, thereby improving the environment in which the negotiations will take place; they try to 'reconcile' the diverse and opposing contentions between the parties; they come up with their 'own proposals' and then coax and persuade the contending parties into agreeing to them.

The Hague Conventions of 1899 and 1907 enunciated the rules by which the mechanisms of good offices and mediation would be governed. It 'stipulated that the signatories to the treaties had a right to offer good offices or mediation, even during hostilities, and that the exercise of the right was never to be regarded by either of the contending sides as an unfriendly act. It ...also explained that such provisions were not binding...laid a duty upon the parties to a serious dispute or conflict to resort to good offices or mediation as far as circumstances allow, before having recourse to arms.'



## Inquiry



NOTES

Inquiry as a legal mechanism for conflict resolution is used when there are differences between parties on fact-based issues. In such cases, a commission of inquiry is instituted, wherein reputed observers conduct the enquiry and specifically ascertain the facts of the dispute. The prerequisites of inquiries were first laid out in the Hague Conference of 1899 'as a possible alternative to the use of arbitration.' However, inquiries have been limited for they can only be applied to international disputes where the parties 'honour' or 'vital interests' are not involved and the conflict is centred on a 'genuine disagreement' pertaining to 'facts which can be resolved by recourse to an impartial and conscientious investigation.'

Inquiry was successfully used in the Dogger Bank incident. In 1904, British naval forces were fired upon by Russian naval ships thinking that they were Japanese torpedoes, their enemy. An international inquiry commission was established and the Hague provisions were enforced. The commission managed to settle the case peacefully. As a result, an interest developed in this mechanism and the Hague Convention of 1907 elaborated on its provisions. But examples of these provisions being applied to commissions of inquiry have been few and far between. In the *Red Crusader* inquiry of 1962, a fact-finding mission was established but it 'incorporated judicial aspects' as well and its report too 'reflected legal findings'.

In spite of its very limited application as a 'separate mechanism' as per the provisions of the Hague Convention of 1907, the importance of inquiry cannot be rejected outright as its usage within the UN and its specialized agencies has increased. They have also been used as part of other legal mechanisms of conflict resolution for 'general fact-finding'.

## Conciliation

According to Malcolm N. Shaw, 'The process of conciliation involves a third-party investigation of the basis of the dispute and the submission of a report embodying suggestions for a settlement.' It, thus includes the essentials of inquiry as well as mediation. In fact, the treaties that provided for permanent inquiry commissions also led to the origin of the process of conciliation. In contrast to arbitrated decisions, conciliation reports are in the form of 'proposals' and thus not binding.

The rules pertaining to conciliation were laid out in the 1928 General Act on the Pacific Settlement of International Disputes. These rules were revised in 1949. The rules elaborated on the function, composition, the site of the proceedings and time period of the commissions. They defined the purpose of the commissions which included both inquiry and mediation techniques. The conciliation commission was to comprise of five people – one member to be appointed by each of the contending parties and the rest of the three members were to be citizens of third states who were to be 'appointed by agreement'. The conciliation proceedings could not be held in public and had to be completed within a period of six months. Thus the conciliation mechanism 'was intended to deal with mixed legal-factual situations to operate quickly and informally.'

Conciliation commissions were favoured as a mechanism during the period between the two world wars 'especially between 1920 and 1938' as several treaties provided for them. However, since then they have not been in much use. Still several multilateral treaties have made provisions for the use of conciliation as a means of conflict resolution such as the 1948 American Treaty of Pacific Settlement, the 1957

NOTES

European Convention for the Peaceful Settlement of Disputes, the 1985 Vienna Convention on the Protection of the Ozone Layer etc.

Conciliation mechanism was used in the dispute between Iceland and Norway. The dispute pertained to the delimitation of a continental shelf between Iceland and Jan Mayen island. The provisions of the agreement that established the Conciliation Commission contained key features of the conciliation method; they noted that the dispute was a matter of 'continuing negotiations' and that the report of the Commission would not be 'binding' on the parties. The Commission proposed the setting up of a joint development zone—something that could not have possibly been done by a judicial body—only a conciliation commission could come up with such an idea. Thus as is evident, conciliation is still a valid and useful method as it is 'extremely flexible'. Moreover, the clarification of facts and the discussion of proposals could encourage the parties to go in for negotiation. Lately, there have been efforts to 'reactivate' the conciliation mechanism but only the future will determine how it fares.

## Arbitration

Arbitration and judicial settlement are two adjudicated methods of dispute settlement whose decisions are binding. Judicial bodies such as courts and tribunals have been rendered 'a special place' in international law as they are 'part of a larger process of peaceful settlement.' Jennings has written to this end, 'The adjudicative process can serve, not only to resolve classical legal disputes, but it can also serve as an important tool of preventive diplomacy in complex situations.'

The 1794 Jay Treaty between Britain and America laid the foundation of the modern form of arbitration as a mechanism. Mixed commissions were established as part of the Treaty with the aim of resolving the legal disputes between the two parties. Arbitration was successfully used in the *Alabama Claims* arbitration of 1872 and further towards the close of the nineteenth century in the *Behring Sea*, *British Guiana* and *Venezuela Boundary* arbitrations. It is evident from these cases that arbitration developed out of the 'processes of diplomatic settlement'. Shaw says, 'International arbitration was held to be the most effective and equitable manner of dispute settlement, where diplomacy had failed.'

The aim of arbitration as given under Article 15 of the 1899 Hague Convention for the Pacific Settlement of Disputes was, 'the settlement of differences between states by judges of their own choice and on the basis of respect for law.' This became the acceptable definition of arbitration, which was further repeated in Article 37 of the 1907 Hague Conventions and was also taken on later by the PCIJ and the ICJ.

A Permanent Court of Arbitration (PCA) was established in 1899 by the Convention for the Pacific Settlement of International Disputes. Though referred to as a 'court', it is not really a court as it does not comprise of 'fixed body of judges'. The PCA consists of a panel of people who are nominated by the contracting states. Each state nominates maximum four people to the panel. Article 44 of the 1907 Hague Convention elaborated that the people who are to be nominated to the panel must be individuals 'of known competency in questions of international law, of the highest moral reputation and disposed to accept the duties of an arbitrator.' When contracting states want to use arbitration, they can choose members from the panel for the tribunal. Thus the PCA works more like a facilitator for establishing arbitration tribunals. Besides, PCA also has an International Bureau which keeps all the records of the Court and thus acts like a 'registry'. The Permanent Administrative Council looks



after the administrative issues of the Bureau. From 1920 to 1932, around twenty disputes were arbitrated by the PCA but after that the numbers declined as the PCIJ came up in the 1920s. Recently, however, the PCA has again begun to play a crucial role.



NOTES

There is no set pattern prescribed for the composition of arbitration tribunals; it can range from 'a single arbitrator' to 'a collegiate body'. When it's a collegiate, all parties appoint equal number of arbitrators; the chairman can be appointed by the parties or the nominated arbitrators can appoint one. Sometimes, a head of state may be appointed as a single arbitrator. The head of state in turn nominates an expert or experts in international law or allied areas to act on his behalf. In the PCA, two arbitrators are selected by each party and only one of these can be 'a national of the state'.

States are under no obligation 'to submit a dispute to the procedure of arbitration, in the absence of their consent. This consent may be expressed in arbitration treaties, in which the contracting states agree to submit certain kinds of disputes that may arise between them to arbitration, or in specific provisions of general treaties, which provide for disputes with regard to the treaty itself to be submitted to arbitration...'

When states submit a dispute for arbitration, they sign a formal document or treaty known as *compromis* or special agreement which defines and specifies all the provisions pertaining to the arbitration: the issue, the rules of procedure of the tribunal, the power of the tribunal and the principles by which the award will be determined. Normally, it is international law that is applied to the proceedings of arbitration but if the parties want and agree upon, they can put in certain specific principles in the *compromis*. The tribunal then has to apply the specific rules. For example, some agreements specify that the decisions of the tribunal must be in accordance with 'law and equity'. This then entails 'that the general principles of justice common to legal systems should be taken into account as well as the provisions of international law.' If no specific provisions are mentioned by the parties, the principles contained in the Hague Convention I of 1899 (revised in 1907) would be applied. A specific characteristic of arbitration is 'that the tribunal is competent to determine its own jurisdiction and therefore interpret the relevant instruments determining that jurisdiction.'

When parties agree to go in for arbitration under Article 18 of the Hague Convention, they were legally bound to accept the terms of its award. Thus once an award has been made by an arbitration tribunal it is 'final and binding', the validity of which cannot be challenged later. In some situations, parties may request a re-opening or revision of the award, to rectify errors or make the tribunal consider certain facts that were unknown at the time of the award.

In some situations, the award of an arbitration tribunal 'may be regarded as a nullity.' There is no consensus among the legal fraternity with regard to the grounds for nullity but it is normally accepted that when a tribunal goes beyond or exceeds the power mentioned in the *compromis*, such as deciding on a question that was not submitted originally or applying such rules that it is not empowered to apply, its award can be regarded as a nullity. Other grounds for nullity could be: 'invalidity of the *compromis*', corruption of a tribunal member, grave deviation from a basic procedural rule etc.

The number of inter-state arbitrations has risen up in the recent years. India and Pakistan went in for arbitration in the *Rann of Kutch* case (1968) to settle the boundary

dispute and again in 2010 to settle the issue of the violation of the Indus Water Treaty as a result of the Kishanganga Hydo-Electric Project are just few of such cases.

Arbitration 'combines elements of diplomatic and judicial procedures.' Its success however depends on goodwill between the parties in coming up with the *compromis*, forming the tribunal and implementing the decision of the award once it is made. The other important aspect is that the 'arbitrators are required to base their decision on law.'

Compared to ICJ, arbitration has several advantages. It is useful in cases where some sort of a technical expertise is needed or where things need to be decided sooner rather than later. Secondly, parties choose their own arbitrators, lay down the laws that need to be applied, the rules to be followed during the procedure, and the time table to be followed to arrive at an award. Additionally, states can request that the proceedings of the arbitration be kept confidential. This is not possible in ICJ where hearings are held in public and the proceedings are published. Moreover, only states can appear in the ICJ proceedings, so arbitration is appropriate for those disputes where the concerned parties are states and international institutions. But the negative aspect is that parties have to bear all the costs of the arbitration process while in the ICJ, costs are borne by the UN.

### Judicial Settlement

The decisions of judicial settlement are binding but these are delivered by 'established and permanent' bodies like that of the ICJ. Popularly referred to as the World Court, the ICJ is the 'principal judicial organ' of the UN. The ICJ is composed of fifteen judges who are elected for a term of nine years. The judges of the Court have rotating membership. The judges are elected from a list of qualified persons which is drawn by national groups who are part of the PCA or 'by specially appointed national groups' where UN members are not part of the PCA. The procedure by which the judges of the ICJ are appointed 'is interesting in that it combines both legal and political elements, while seeking to exclude as far as possible the influence of national states over them.' Elections are held every three years with five judges being elected each time.

The ICJ delivers decisions pertaining to international law 'as it exists at the date of the decision.' However, it does not make laws as it is not a legislative body. Though Article 36(2) of the ICJ Statute requires that the disputes brought to it by the parties should be 'legal' in nature, in reality these are entangled with political factors. Distinguishing between a dispute and a circumstance which could possibly lead to an 'international friction' or to the emergence of a dispute, the Court defined dispute as 'a disagreement over a point of law or fact, a conflict of legal views or of interests between two persons.' The distinction is a 'subtle' one but no less important for if the Court has to successfully settle an issue or issues between states, it should be able to specifically identify them. What falls within the jurisdiction of the Court is a matter that only the Court can decide.

Apart from deciding 'disputes of a legal nature' between states 'in accordance with international law', the jurisdiction of the ICJ also includes giving advisory opinion 'on legal questions' to 'particular qualified entities' when there is a request to that effect. These entities could be organs of the UN or its specialized agencies who have the authority to make such a request. Thus the Court has a 'dual jurisdiction'.

As per Article 34 of the Statute of the Court only states could be parties in cases before it. This implies that individuals and international organizations cannot approach the ICJ. Further, the Court's Statute says that its jurisdiction 'comprises all cases which the parties refer to it and all matters specially provided for in the Charter of the United Nations or in treaties or conventions in force', apart from all the cases that are referred to it by the parties. If one party files an application, the Court will have jurisdiction only when the other state accedes to its jurisdiction. Thus the Court's jurisdiction is based on 'the consent of the parties'.

Article 60 of the Statute of the Court declares that its judgement 'is final and without appeal', although having no binding force. In any case, the ICJ itself is not troubled 'with compliance' and took the following view in the *Nuclear Tests* case, 1974 'once the Court has found that a state has entered into a commitment concerning its future conduct it is not the Court's function to contemplate that it will not comply with it.'

The ICJ was marginalized until the 1980s as it was rejected by the Soviet bloc. The Third World states too became opposed to the ICJ when some rulings went against them. But things changed for the better when in 1984 the ICJ ruled against the United States in the *Republic of Nicaragua* v. *The United States of America* case. This case was brought by Nicaragua against the United States and pertained to the mining of Nicaraguan harbours. The ICJ not just ruled in favour of Nicaragua but also awarded reparations to it. However, the United States never really gave any compensation to Nicaragua as it blocked the UN Security Council from implementing the judgement. Post this judgement, the ICJ got 'flooded with cases'.

As is evident from the above case, states have been selective in accepting the adjudicated decisions of the ICJ. The ICJ has 'effectively resolved potentially troubling, long-festering, marginal disputes, especially involving disputed frontiers and maritime boundaries...other technical matters' but 'has not been very successful in relations to fundamental conflicts involving core interests of states.' Thus, the 'verdict on international courts is ... mixed. On the one hand, states are gradually becoming accustomed to letting go of enough sovereignty to settle disputes in court instead of combat. On the other adherence to the dictates of the World Court is entirely 'consensual'—it is up to the consent of those involved—whereas adherence to domestic law is obligatory.'

It must be mentioned here that apart from international law and the United Nations, several regional organizations such as the African Union (Organisation of African Unity) and the Arab League have also established mechanisms for the peaceful settlement of disputes. However, these are outside the purview of this book.

### 4.7.1 Education for Culture of Peace and Non-Violence

In a violent culture, the use of violence as an instrument or a tool is legitimized, e.g. there are cultures where war is seen as aesthetically beautiful, even sacred (holy war); and cultures where some kinds of killings are right and just. The world has already witnessed two World Wars and numerous other small and big violent wars resulting in huge losses of life and property and insurmountable misery. Besides, we are witness to different kinds of conflicts at various levels—inter-state, intra-state, ideological, ethnic and communal, factional, conflicts over resources etc.; interpersonal, organizational, community, social, national and international level. Societies, nations and countries thus seem to be embroiled in a 'culture of violence' where there is no respect for the sanctity of life and violence is all pervasive. However, if war culture is a reality of the human race, peace culture too is a fact of human lives.

OTES

According to sociologist Elise Boulding, peace culture 'can be defined as a mosaic of identities, attitudes, values, beliefs, and patterns that leads people to live lovingly with one another and the earth itself without the aid of structured power differentials, to deal creatively with their differences, and to share their resources'. Conflicts are present in peace cultures but they are dealt with creatively. This ability to deal with differences is at the heart of peace cultures. In peace cultures, there is 'creative balance among bonding, community closeness, and the need for separate spaces'. The term 'peace' in peace cultures refers to 'positive relation between parties, of union, togetherness'. Societies and cultures develop their own patterns of balancing between peace and violence, between needs for bonding and separate spaces or autonomy.

Peace and violent conflict/war need to be seen as a continuum wherein on one end of the spectrum are different forms of war while on the other end there are cooperation and integration and problem-solving activities like negotiation and mediation. We thus have alternative choices. As human beings, we make the decision of whether to go for violent activities or to side with peace activities, based on various factors and circumstances.

Religious traditions usually comprise of two 'contrasting themes – holy war culture and holy peace culture'. The holy war culture is based on patriarchal notions and exercises force and domination over the weak and the marginalized at various levels – the family, the community, the national and the international. On the other hand, in holy peace cultures, 'love' primarily guides all actions; it treats all persons equally. Holy peace cultures based on nonviolence are present in some religious traditions such as the Anabaptists in Christianity. All religions contribute to the building of a peace culture in some way or the other.

It may seem as if a culture of violence is all pervasive but it is not inherent in human beings; human beings can accommodate both culture of war as well as culture of peace. Peace as well as violent and aggressive elements is generally present in all cultures. However, some cultures may have more of the former and less of the latter as in some of the faith-based communities. The peace elements of a culture may not be very visible but that does not mean that it does not have any; we may just not be looking for it in the right place. These peace resources which are found in all societies need to be harnessed to shift the balance from violence towards peace. Such resources include but are not limited to 'utopian longing for peace, both secular and faith-based peace movements, environmental and alternative-development movements, and women's culture'.

There is a vision and longing for peace in communities and societies; idealistic notions of 'heaven' and 'paradise' are part of this belief. Holy peace teachings have led to the emergence of faith-based peace movements which aim to train people in nonviolence, actively protest against militarism and collaborate with other communities on peace issues. Secular peace movements have also become very visible in contemporary times. International and other non-governmental organizations (NGOs) have tried to bring together people from all walks of life and of different nationalities on common platforms. They raise issues that touch human lives – social, economic, political and cultural. These organizations work on various issues of peace (may be not directly always) and contribute to the building of a peace culture, e.g., on disarmament, development, human rights and non-violence.





NOTES

The environmental movement is also contributing to the building of a peace culture. This was evident in the Earth Charter initiative, Kyoto Protocol etc. Grassroots organizations and local self-help groups have tried to creatively resolve local social, economic and environmental issues as evidenced by the Grameen Bank in Bangladesh and the Chipko movement in India to name a few. Women's organizations are increasingly visible all over the globe. They are not just raising daily bread and butter issues but are also contributing to the cause of peace. Women's movements are also focusing on the various kinds of violence inflicted on women, both in the private realm as well as in the public space and how violence affects women differently. Youth and children too are seen to be actively contributing to the peace movement. The organizations like Voice of Children and Rescue Mission: Planet Earth are also devoted to this cause. All these movements are trying in their own small ways to break the shackle of a global system based on domination, militarism and power.

The family is a source of peace culture as well as of violence. Women's culture of nurturing flourishes in the family. They bear and rear children and take care of the needs of the rest of the family. This nurturing culture plays a critical part in the development of peace behaviour. Besides, communities have developed their own ways and means of resolving conflicts. These are passed on from generation to generation through families and are also interwoven into stories, folklores, songs, symbols, etc.

The Anabaptist culture which is prevalent in the religious communities of Quakers, Mennonites and Brethren pay special attention to raising children so that they grow up into peaceful nonviolent adults. They are trained in nonviolent ways of responding to conflict. These cultures also make active contribution to peace-building such as the Mennonite Central Committee (MCC), which works globally on peace and justice issues.

The concept of 'zones of peace' has always been existent in human history. Temples and holy sites have been seen as safe places. The Hebrew Bible declared that farmlands and orchards and the women who tend them will be protected in war times. This concept of safe place has carried forward in modern times as well. Cities and towns or specific places within them are declared as safe zone. Also there are a small number of countries presently who have no military forces, viz., Costa Rica. Besides, there are nuclear-weapon-free zones which have been established by treaties facilitated by the United Nations, e.g., the Treaty for the Prohibition of Nuclear Weapons in Latin America and the Caribbean, popularly known as the Treaty of Tlatelolco, signed in 1967.

The culture of violence and war poses major obstacles to a culture of peace. The culture of violence can be seen not just in overt forms of violence but it is visible in the functioning of institutions as well (structural violence), for they deprive certain rights and the ability to satisfy basic human needs to some groups. Besides, it is also noticeable in the media, in our behaviours, attitudes and relations. However, as seen above, sustained efforts are being made to shift from a culture of violence to a culture of peace. The resources that will facilitate this shift are present in almost all cultures, we just need to dig them out and start making use of them in our daily lives.

A culture of peace needs to be based or built on three elements – equality, equity and mutual respect. Structures based on inequality and inequities are likely to lead to conflict and violence, sooner or later. Thus structures should first and foremost aim at fulfilling basic human needs which will ensure dignity to human lives. This

NOTES

needs to be done at the local and national level. At the global level, trade and other relations between states need to be based on equal exchange. This will take care of equity issues. The peace elements of one's own culture as well as that of other cultures need to be respected and celebrated.

## 4.7.2 UNESCO's Culture of Peace Initiative

The concept of 'culture of peace' was formulated at the International Congress on Peace in the Minds of Men, held in Cote d'Ivoire in 1989. The International Congress recommended that the United Nations Educational, Scientific and Cultural Organization (UNESCO) 'help construct a new vision of peace by developing a peace culture based on the universal values of respect for life, liberty, justice, solidarity, tolerance, human rights and equality between men and women'. The context in which the International Congress took place and came up with such a far reaching recommendation is also significant – the Berlin Wall had just fallen and the Cold War had come to an end.

In 1994, the first International Forum on the Culture of Peace was held in San Salvador, the capital city of El Salvador. In 1998, the United Nations General Assembly [resolution A/52/13] defined Culture of Peace as consisting of values, attitudes and behaviours that reject violence and endeavour to prevent conflicts by addressing their root causes with a view to solving problems through dialogue and negotiation among individuals, groups and nations. So simply speaking, 'a culture of peace is a culture that promotes peace'.

In 1999, the United Nations General Assembly adopted the Declaration and Programme of Action on a Culture of Peace. It came up with eight action areas that are linked to culture of peace and non-violence:

- *Fostering a culture of peace through education* by promoting education for all, focusing especially on girls, revising curricula to promote the qualitative values, attitudes and behaviour inherent in a culture of peace, training for conflict prevention and resolution, dialogue, consensus-building and active non-violence.
- *Promoting sustainable economic and social development* by targeting the eradication of poverty; focusing on the special needs of children and women; working towards environmental sustainability; fostering national and international co-operation to reduce economic and social inequalities...
- *Promoting respect for all human rights* by distributing the Universal Declaration of Human Rights at all levels and fully implementing international instruments on human rights.
- *Ensuring equality between women and men* by integrating perspective and promoting equality in economic, social and political decision-making; eliminating all forms of discrimination and violence against women; supporting and aiding women in crisis situations resulting from war and all other forms of violence.
- *Fostering democratic participation* by educating responsible citizens; reinforcing actions to promote democratic principles and practices; establishing and strengthening national institutions and processes that promote and sustain democracy.
- *Advancing understanding, tolerance and solidarity* by promoting a dialogue among civilizations; actions in favour of vulnerable groups, migrants, refugees and displaced persons, indigenous people and traditional groups; respect for difference and cultural diversity.
- *Supporting participatory communication and the free flow of information and knowledge* by means of such actions as support for independent media in the promotion of a culture of peace; effective use of media and mass communications; measures to address the issue of violence in the media; knowledge and information sharing through new technologies.
- *Promoting international peace and security* through action such as the promotion of general and complete disarmament; greater involvement of women in prevention and resolution of conflicts and in promoting a culture of peace in post-conflict situations; initiatives in conflict situations; encouraging confidence-building measures and efforts for negotiating peaceful settlements.

The term 'culture of peace' was inspired by an educational initiative in Peru and the Seville Statement on Violence, both of which were developments in the year 1986. The Peru initiative was referred to as *Cultura de paz*. The Seville Statement on Violence was written for the United Nations sponsored International Year of Peace. It involved a team of international specialists who proved that peace is in fact possible because 'war is not a biological necessity'. The need for such a statement arose as there was and there is a widespread notion that human beings are inherently conflictual, that we are genetically programmed for violence. But the Seville Statement based on scientific research and evidence proved otherwise. It made the following conclusions:

1. It is scientifically incorrect to say that we have inherited a tendency to make war from our animal ancestors.

   Scientists conducted studies on animal behaviour including animal aggression. Prof. John Paul Scott reviewed these studies at Seville and concluded that warfare is unique to human beings.

2. It is scientifically incorrect to say that war or any other violent behaviour is genetically programmed into our human nature.

   The role of genes is to provide a developmental potential but that can be realized only in combination with the ecological and social environment. Genes neither produce individuals inclined towards violence nor do they determine the opposite. Human beings have the capacity for violence and selfishness but they also have the capacity for nonviolent action and cooperation as well.

3. It is scientifically incorrect to say that in the course of human evolution there has been a selection for aggressive behaviour more than for other kinds of behaviour.

   Among species, status within the group is attained by cooperating and fulfilling socially relevant functions. The Seville Statement therefore argued that violence is neither in the human evolutionary legacy nor in their genes. Experts who claim that humans are violent and selfish by nature tend to overemphasize the importance of aggression and under-emphasize the importance of cooperation.

4. It is scientifically incorrect to say that humans have a 'violent brain'.

   The neurophysiology of human beings does not compel them to react violently. Human acts are shaped by how they have been conditioned and socialized. Culture and cultural factors play a role in this.



NOTES

**Check Your Progres**

18. **State whether True/False:**
    (a) The Permanent Court of International Justice (PCJI) was an organ of the United Nations.
    (b) States are under obligation to make efforts to resolve their disputes.
19. **Fill in the blanks:**
    (a) International law is 'law of .....'.
    (b) The term ..... emerged for the first time in Jeremy Benthem's Principles of International Law.
20. **Multiple choice questions:**
    (a) Which among the following is not a source of International Law?
    (i) Classical writing
    (ii) Customary law
    (iii) International treaties and agreements
    (iv) Rulings of national courts

NOTES

5. It is scientifically incorrect to say that war is caused by 'instinct' or any single motivation.

Cognitive factors are more important in modern warfare than emotional and motivational factors, sometimes referred to as 'instincts'. Modern war involves the use of personal characteristics such as obedience, social skills such as language and rational considerations such as cost-calculation, planning and information processing. Thus war is not solely based on instincts.

The Seville Statement was endorsed by a wide range of scientific and professional organizations around the world and was based on the latest scientific evidence. It was adopted by the UNESCO in 1989. The Statement argued that there is nothing in our biology which is an insurmountable obstacle to the abolition of war and other institutional violence. It concluded that war is neither in our genes nor is it inherent in human nature; it is actually a 'social invention'. Therefore, there is nothing that prevents human beings from creating peace; if they can create war, they can also create peace. It is thus possible to replace the 'culture of violence' with a 'culture of peace'.

The year 2000 was designated as the International Year for the Culture of Peace. A global movement representing an alliance of actors working towards a culture of peace emerged during this year. 2001–2010 was designated by the General Assembly as the International Decade for a Culture of Peace and Non-violence for the Children of the World with the aim of creating a world free of violence for the future generations.

The Preamble of the Charter of the United Nations states, 'We the peoples of United Nations (are) determined to save succeeding generations from the scourge of war, which twice in our lifetime has brought untold sorrow to mankind'. If we are to save succeeding generations from the scourge of war, we need to build a culture of peace. Fostering a culture of peace is needed today much more than ever as conflicts are no longer being fought on battlefields but within and between societies and communities.

**Check Your Progress**

21. **State whether True/False:**
    (a) The holy war culture is based on patriarchal notions.
    (b) They year 2010 was designated as the International Year for the Culture of Peace.
22. **Fill in the blanks:**
    (a) In holy peace cultures ..... guides all actions.
    (b) The family is a ..... of peace culture as well as of violence.
23. **Multiple choice questions:**
    (a) Which among the following is not true for the Seville Statement on Violence?
        (i) War is a biological necessity.
        (ii) War is not inherent in human genes.
        (iii) War is a social invention.
        (iv) Peace is possible.

## 4.8 MUNICIPAL LAW

Municipal law includes national as well as provincial, regional and local level laws. It will be discussed here in the context of India and will refer only to national laws.

### 4.8.1 Conflict Resolution in Indian Municipal Law

For many centuries, mediation was the primary means of conflict resolution in India. The *Panchayat* system in which a respected village elder(s) assists in resolving community disputes was an accepted method of conflict resolution for long. The British occupation of India and the anglicization of the Indian legal system put the popular indigenous institution of Panchayat into disuse in many parts of India and substituted it with the adversarial litigation based on English common law principles. After independence, arbitration was accepted as the legal means for conflict settlement and was the most utilized method. From 1996 onwards, however, serious and genuine efforts are being made to formally integrate mediation in the judicial system.

In 1996, a national level joint Indo-US study was conducted under the leadership of the then Chief Justice of India, Justice A.M. Ahmadi. The general purpose of the study was to examine the Indian judicial system and the specific aim was to look at





NOTES

case management and dispute resolution. The study recommended procedural reforms especially legislative changes which would authorize the use of the process of mediation.

Mediation was formally introduced for the first time in India by the Arbitration and Conciliation Act, 1996. This Act came into force with effect from 22 August 1996. The Act was based on the United Nations Commission on International Trade Law (UNCITRAL) Model Law on International Commercial Arbitration and the UNCITRAL Conciliation Rules. It provides a legal framework for the process of mediation and permits its voluntary use with protections of confidentiality and the ability to develop legally binding agreements. In fact, Section 30 of the Arbitration and Conciliation Act specifically encourages the contending parties to go in for mediation and conciliation even while arbitration proceedings are going on. But the problem was that the Act did not provide the rules for mediation though it did so for conciliation.

It's not as if pre-1996, there were no laws in India on these dispute resolution mechanisms. The Arbitration Act of 1940 was very much in existence but it was proving to be inadequate in dealing with the problems of the post-liberalization era. This era required quicker resolution of disputes but that was not possible as courts were already overburdened with cases and secondly, court administered judicial process was a long-drawn one. That is why initiatives were undertaken to develop alternative modes of dispute resolution.

Further, in 1999 the Government of India enacted the Code of Civil Procedure (Amendment) Act, 1999 (CPC Amendment Act) wherein mediation as an Alternative Dispute Resolution (ADR) process was institutionalized. This Act came into effect on 1 July 2002. Section 89 of the Act introduced the concept of 'judicial mediation' (in the 1996 Act, it was 'voluntary mediation') and also clearly distinguished between 'conciliation' and 'mediation', not using these terms interchangeably. The new Section enjoined that where it 'appears to the Court that there exists elements of a settlement which may be acceptable to the parties, the Court shall formulate the terms of settlement and give them to the parties for their observations and after receiving the observations of the parties, the Court may reformulate the terms of a possible settlement and refer the same for—

(a) Arbitration
(b) Conciliation
(c) Judicial settlement including settlement through *Lok Adalat*; or
(d) Mediation

The new Section thus gave the courts the power to identify those cases where there was a possibility of amicable settlement. In case, the court felt that mediation was the appropriate mode of settling the issue, it could itself act as a mediator and initiate a compromise between the parties. If the parties failed to satisfactorily resolve the matter through any of the ADR methods, the matter had to be referred back to the court.

In July 2001, the Indian Center for Mediation and Dispute Resolution (ICMDR) was established as the first organization in the country to further the development of mediation as an appropriate method of dispute resolution. The Center, headquartered in Madras, had the support of Judges and senior attorneys of both the Supreme Court of India and the High Court of Madras. The Center's goals included providing training

to those interested in serving as mediators, offering seminars for judges, attorneys, and corporate entities on ADR, providing ADR consultancy services, and instituting a panel of highly qualified neutrals to assist in the resolution of court-referred and privately-referred matters.

In spite of these initiatives, mediation and other ADR methods have still not caught on in India, though they are certainly spreading. First of all, the awareness about the availability of these ADR mechanisms is very low, both among the lawyers as well as the litigants. Some training sessions have been organized but obviously those are not enough. Litigants do not have much information about the process so they are afraid and anxious about what it may entail. Lawyers have been looking at mediation suspiciously and are not ready to accept this change. They feel that the mediation process will deprive them of their incomes. Some lawyers in fact challenged the CPC Amendment Act. But the Supreme Court in a judgment in the *Salem Advocate Bar Association, Tamil Nadu* vs. *Union of India* case, 2005 pronounced that as far as court matters were concerned, reference to the processes of mediation, conciliation and arbitration was mandatory. This judgement will hopefully encourage more and more lawyers as well as litigants to go in for mediation and utilize its provisions. Besides, the Supreme Court in an interim order given on 22 August 2010, asked Assam and Nagaland to go in for mediation to solve their border dispute. For the first time in the history of independent India, a border dispute was being referred to mediation.

The misperceptions and apprehensions about the ADR processes need to be dealt with and clarified. It has to be made very clear that the ADR processes are meant to complement the judicial process and not replace it.

## Settlement through *Lok Adalats*

***Lok Adalat*** can be understood as a dispute or grievance settlement forum, involving the people, who are directly or indirectly affected by the dispute or grievance. It is a voluntary mechanism and is different from adjudication. It emphasizes on out-of-court settlement, mutual consent, conciliation and inexpensive and expeditious justice. It is also referred to as 'People's Court', 'Mobile Court' or 'Open Court'. *Lok Adalats* were started with the aims of relieving the courts of their heavy workload, developing an alternative dispute settlement mechanism and providing inexpensive justice to the poor. The idea was to take justice out of the courts to the people.

In 1958, the Law Commission of India in its 14th report stressed the necessity of legal aid by stating that some provision has to be made for assisting the poor man for payment of court fees and lawyer's fees and other incidental costs of litigation. With this end in view, Article 39A was introduced in the Constitution of India. This Article provides for free legal aid to the poor and weaker sections of society.

The first *Lok Adalat* was held in 1978 in Kalyan, near Mumbai (what was then Bombay), on an experimental basis. This beginning did not make much headway until 1981 when the then Chief Justice of the Gujarat High Court, Justice M P Thakkar, started holding these *Lok Adalats* every fortnight, in different parts of the state. They dealt with mostly cases pending in courts. Within a short time, this became a movement in Gujarat and gradually *Lok Adalats* became popular in other states as well.

In 1980, a committee was set up for implementing the legal aid schemes. Legal Aids and Advice Boards were constituted throughout the country for the settlement of disputes, pending before courts. A review of the working of these Boards showed





that the constitution of statutory Legal Services Authority at the national, state and district level was desirable. This resulted in the passing of the Legal Services Authorities Act, 1987 which gave the *Lok Adalats* a statutory recognition. Before this Act was passed, *Lok Adalats* were non-statutory in nature and did not have the power to summon anybody. The Legal Services Authorities Act, 1987 contemplated three functions for the Authorities and committees under it:

- To organize *Lok Adalats* for the settlement of cases and other disputes.
- To spread legal literacy by conducting legal literacy camps, impart legal education by publication of pamphlets on various laws, starting and running of legal aid centres.
- To give free and competent legal services to the weaker sections of the society.

The Legal Services Authorities Act, 1987 was amended in 1994 and the amended Act came into force in November 1995. The Legal Services Authorities Act, 1987 provided statutory status to the legal aid movement and also provided for setting up of Legal Services Authorities at the Central, State and District levels. It aimed at providing free and comprehensive legal services to the weaker sections. National Legal Services Authority (NALSA) has been setup for implementing and monitoring legal aid programmes in the country.

*Lok Adalats* have been conferred jurisdiction to settle civil, criminal or revenue disputes. Thus the scope of *Lok Adalats* is very wide, so as to include all types of disputes with the only exception of non-compoundable criminal offences. In the *Lok Adalat*, not only disputes pending in courts can be resolved but even matters which have not reached a formal adjudicatory forum can be settled. Generally, *Lok Adalat* consists of three members – a sitting or retired judicial officer, a member of the legal profession (advocate, law officer etc.) and a social worker, preferably a woman. Voluntary organizations, lawyers, social workers and law students can also be associated with the functioning of the *Lok Adalat*.

Parties have the right to decide whether they want to submit their dispute to the *Lok Adalat*. The function of the *Lok Adalat* is to determine and arrive at compromise or settlement between the parties to a dispute in respect of pending cases and even in cases, which are not brought before any court. Thus the decisions of the *Lok Adalat* are a win-win situation for the parties; there are no victors and losers. An award or settlement of *Lok Adalat* is deemed to be a decree of the civil court or order of a Tribunal and can be executed in the court concerned. The award is final and binding on the parties to the dispute. No appeal lies against such a decree.

*Lok Adalats* have the powers of a civil court in summoning and examining witnesses, requisitioning of public records etc. They are also open to specify their own procedures but these must be guided by principles of justice, equality and fair play. Members ensure fairness and equality in its proceedings so that the weaker party is not compelled to enter into unjust compromises. Lawyers can represent their clients with the permission of the *Lok Adalat* but advocacy, as in a regular court, is not encouraged. When a settlement is reached, it has to be written down in simple and clear terms. In case no compromise is reached, the case goes back to regular trial. If a settlement is reached, the petitioner gets back the court fees paid for registering the plaint.

Insurance companies find the compensation amounts settled through *Lok Adalats* in motor accident cases economical and administratively convenient. They thus opt for the *Lok Adalat* route. Permanent *Lok Adalats* are held all over the country but

most get organized in the cities and districts rather than in the interiors and rural parts of the country where land disputes abound. *Lok Adalats* would be of much help here.

To conclude, *Lok Adalats* minimize litigation expenditure and save valuable time of the parties and their witnesses. It is thus playing a key role in sustaining the people's faith in courts by dispensing expeditious and inexpensive justice.

NOTES

**Check Your Progress**

24. **State whether True/False:**
    (a) Conciliation reports are binding.
    (b) Conciliation commissions were favoured as a mechanism during the period between the two world wars.
25. **Fill in the blanks:**
    (a) The 1794 Jay Treaty between Britain and ..... laid the foundation of the modern form of arbitration as a mechanism.
    (b) Permanent Court of Arbitration's International Bureau keeps all the records of the Court and acts like a ..... .
26. **Multiple choice questions:**
    (a) When compared to International Court of Justice, which among the following is not an advantage in arbitration?
        (i) Things are decided sooner here
        (ii) Proceedings can be kept secret
        (iii) Parties have to bear all the costs
        (iv) Parties can be states as well as international institutions

## 4.9 SUMMARY

In this unit, you have learnt that:

- A value is what an individual desires, likes or prefers. Value comes from, the Latin word 'valere', which means to be of worth or to be strong.
- In its philosophical or educational interpretation, values signify neither a thing nor an individual but a reflection or a point of view.
- According to its verbal meaning, values signify that eminence of an individual or things which makes that individual or thing important, respectable and useful. This quality or eminence can be internal or external or both.
- Educational values are related to those activities which are good, useful and valuable from the point of view of education. Earlier also it has been pointed by Adams that education is a bipolar process which has two parts (1) The teacher and (2) The child.
- Religion etymologically refers to a state of unification between two aspects which not look separated for whatever reason, but have the capability of becoming one again. Religion, therefore, believes in the unity of man and God.
- The culture of a person may be roughly described as the expression of a 'consciousness of life' which formulates itself in three aspects.
- Truth (*satya*), righteous conduct (*dharma*), peace (*shanti*), love (*prem*) and non-violence (*ahimsa*) are the core universal values. They are the foundation for the building of value-based education programme.
- Social value is defined in terms of charity, kindness, love and sympathy for the people and efforts to serve God through the service of mankind.
- Power value is defined as the conception of desirability of ruling over others and also of leading others.
- Milton Rokeach created the Rokeach Value Survey (RVS). It consists of two sets of values, with each set containing eighteen individual value items. One set is called terminal values which refer to desirable end-states of existence and the other set is called instrumental values.
- The core of democratic peace theory is the idea that democratic states do not go to war against each other or rarely indulge in this act. However, democratic states are likely to go to war against non-democracies.
- Peace is viewed as positive and negative. Negative peace means the absence of organized state or military violence or war. This is the realist theory or realpolitik perspective of peace. Positive peace is not just about the absence of war but rather the absence of overt as well as structural violence.
- Justpeace includes the containment and reduction of not just overt conflict and overt violence but also the transformation, if not elimination, of structural conflict and structural violence. The concept of justpeace contends that when justice is pursued violently it further adds to injustice. Thus peace without justice will not be sustainable.

*Value Education and Peace Education*

NOTES

- Peace as well as violent and aggressive elements is generally present in all cultures. The peace resources found in different societies need to be harnessed to shift the balance from violence towards peace. These resources include utopian notions of peace, faith-based peace movements, secular peace movements, the environmental movement and alternative-development movements, and women's culture of nurturing.
- In 1999, the United Nations General Assembly adopted the Declaration and Programme of Action on a Culture of Peace. It came up with eight action areas that are linked to culture of peace and non-violence: fostering a culture of peace through education; promoting sustainable economic and social development; promoting respect for all human rights; ensuring equality between women and men; fostering democratic participation; advancing understanding, tolerance and solidarity; supporting participatory communication and the free flow of information and knowledge; and promoting international peace and security.
- Law, both international and municipal, provide the legal means for conflict resolution. International law or the 'law of nations' deals with interactions between states and provides rules regarding how to conduct international interaction while municipal law concerns the national and domestic law of a state.
- The main idea behind the emergence of international law was to manage conflict among states as it was felt that laws would bring in order and lessen violent conflict. However, just the presence of laws does not necessarily mean that it would be easy to resolve conflicts. Laws can be a point of contention as well.
- The beginning of international law can be traced to the Treaty of Westphalia, 1648 which stressed upon the sovereign equality of states. However, it was only in 1783 that the term 'international law' emerged for the first time in Jeremy Benthem's *Principles of International Law*.
- Negotiation is a simple, active and the 'most utilised form' of conflict resolution. In negotiation, contending parties discuss their differences directly with each other, without the involvement of a third party; the overall aim is reconciliation of differences. If reconciliation does not happen due to various reasons, the idea is to at least understand each other's positions. Normally, negotiation becomes 'the precursor' for other settlement procedures such as mediation, as parties use it initially to clarify disagreements.
- Inquiry as a legal mechanism for conflict resolution is used when there are differences between parties on fact-based issues. In such cases, a commission of inquiry is instituted, wherein reputed observers conduct the enquiry and specifically ascertain the facts of the dispute. The Hague Conference of 1899 saw inquiry as a possible alternative to arbitration. The treaties that provided for permanent inquiry commissions also led to the origin of the process of conciliation. Conciliation reports are in the form of 'proposals' and thus not binding.
- The ICJ is the 'principal judicial organ' of the UN. The ICJ does not make laws as it is not a legislative body. Its decisions thus pertain to international law. The

NOTES

Court has dual jurisdiction: it decides on legal disputes between states and also gives advisory opinion when this is sought by organs of the UN or its specialized agencies. The ICJ was marginalized until the 1980s as it was rejected by the Soviet bloc. The Third World states too became opposed to the ICJ when some rulings went against them. But things changed for the better when in 1984 the ICJ ruled against the United States in the *Republic of Nicaragua v. The United States of America* case.

- Mediation was formally introduced for the first time in India by the Arbitration and Conciliation Act, 1996. This Act came into force with effect from August 22, 1996. It provides a legal framework for the process of mediation and permits its voluntary use with protections of confidentiality and the ability to develop legally binding agreements.
- *Lok Adalat* can be understood as a dispute or grievance settlement forum, involving the people, who are directly or indirectly affected by the dispute or grievance. It is a voluntary mechanism and is different from adjudication. It emphasizes on out-of-court settlement, mutual consent, conciliation and inexpensive and expeditious justice.
- *Lok Adalats* have the powers of a civil court in summoning and examining witnesses, requisitioning of public records etc. They are also open to specify their own procedures but these must be guided by principles of justice, equality and fair play.

## 4.10 KEY TERMS

- **Values:** They are beliefs about what is correct or incorrect and what is important in reference to the ideal situation in life.
- **Value education:** It is an issue of inculcating suitable conduct and habits which is done by developing constructive qualities.
- **Peace culture:** It has been defined as a mosaic of identities, attitudes, values, beliefs, and patterns that leads people to live lovingly with one another and the earth itself without the aid of structured power differentials, to deal creatively with their differences, and to share their resources by sociologist Elise Boulding.
- **Peace education:** In UNICEF it refers to the process of promoting the knowledge, skills, attitudes and values needed to bring about behavior changes that will enable children, youth and adults to prevent conflict and violence, both overt and structural; to resolve conflict peacefully; and to create the conditions conducive to peace, whether at an intrapersonal, interpersonal, intergroup, national or international level.
- **Arbitration:** It is a form of alternative dispute resolution (ADR), is a technique for the resolution of disputes outside the courts.

## 4.11 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Values have both content and intensity attributes. The content attribute says that a mode of conduct or end state of existence is important. The intensity attribute specifies how we rank an individual's value in terms of their intensity which helps to obtain that person's value system.





NOTES

2. A social value integrates the three aspects: emotions, activities and cognitive elements, which operate simultaneously. The difference of these aspects vanishes automatically in social values.
3. It is the development or creation of a literal, visionary and responsible faith in us that comes only after long, tough labour.
4. (i) True (ii) False
5. Efficiency
6. Following are the important activities to be undertaken in the school in this regard:
   (a) Celebration of national festivals
   (b) Social service programmes
   (c) Emphasis on the unity of all religions, harmony among communities and national integration
   (d) Development of scientific temper
   (e) Community prayer in the school
7. It includes inculcating qualities of sincerity and faithfulness to what one considers to be the highest, gratitude, honesty, benevolence, generosity, cheerfulness, selflessness, freedom from ego, equanimity in joy and suffering, honour in both success and failure, pursuit of the deepest and the highest of the absolute and ultimate and the progressive expression of this pursuit in thought, feeling and action.
8. There are two main models of social action as given by Britto (1984). They are:
   (a) Elitist social action
   (b) Popular social action
9. It was formally founded by Brahma Kumari devotee Diane Tillman, who is a licensed educational psychologist and marriage and family therapist in Seal Beach, California, in association with co-authors Diana Hsu, Pilar Quera Colomina and other Brahma Kumari followers.
10. **State whether True/False:**
    (a) False
    (b) True
11. **Fill in the blanks:**
    (a) Perpetual Peace
    (b) negative
12. **Multiple Choice Questions:**
    (a) (i)
    (b) (iii)
13. (a) False
    (b) False
14. (a) Three
    (b) Cultural

NOTES

15. (a) True
    (b) False
16. (a) anekanta
    (b) Ashoka
17. (a) (iv)
    (b) (ii)
18. (a) False
    (b) False
19. (a) Nations
    (b) International Law
20. (a) (iv)
21. (a) True
    (b) False
22. (a) Love
    (b) Source
23. (a) (i)
24. (a) False
    (b) True
25. (a) America
    (b) Registry
26. (a) (iii)

## 4.12 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. What do you understand by value?
2. Give any two definitions of value.
3. Why are values important?
4. List the different sources of values.
5. What are the causes of value crisis in the present society?
6. What are the Indian approaches to peace?
7. How do major religions of the world conceptualize peace?
8. Define the democratic theory of peace and differentiate it with the conservative and liberal viewpoint on peace.
9. State how human rights, ecological and economic well-being and social justice are the essential ingredients of peace.
10. What are the major sources of international law? What are the differences between international law and municipal law?
11. Write a note on the legal means for conflict resolution available in international law.
12. What is negotiation in international law? How is it different from mediation?
13. Define inquiry as a mechanism of conflict resolution. Why does it have a limited usage?
14. Define conciliation. What are its advantages and disadvantages?

### Long-Answer Questions

1. Write short note on core universal values.
2. Which are the two types of values given by Rokeach? Elaborate.
3. Explain moral values as given by different schools.
4. Write a note on religious values.
5. Explain the concept of aesthetic values.
6. Write short notes on environment, health, economic and democratic values.
7. What is a peace culture? Distinguish between holy war culture and holy peace culture?
8. Peace resources are found in all cultures. Do you agree? Substantiate with examples.
9. Write a note on the UNESCO's Culture of Peace Initiative.
10. What were the major conclusions of the Seville Statement on Violence?
11. Distinguish between 'Peace Education' and 'Education for Peace'. Discuss the shift from value education to Education for Peace at the school level in India.
12. Compare judicial settlement as done by the International Court of Justice with arbitration. Which is more advantageous of the two and why?
13. The decisions of arbitration and judicial settlement are binding. Substantiate the statement.
14. Discuss the role of judicial settlement in resolving conflicts especially in the context of the International Court of Justice.
15. Discuss the introduction and working of the Alternative Dispute Resolution processes of mediation, conciliation and arbitration in India.
16. Write an explanatory note on the phenomenon of Lok Adalats in India.

## 4.13 FURTHER READING

Gandhi, K.K.; *Value Education: A Study of Public Opinion*, Gyan Publishing House, New Delhi, 1993.

Mukerji, R.K.; *The Social Structures of Values*, Macmillan & Co., London, 1949.

Brubacher, J.S.; *Modern Philosophies of Education*, McGraw-Hill Book Company, London, 1983.

Barash, David P. (ed.); *Approaches to Peace: A Reader in Peace Studies*, Oxford University Press, New York & Oxford, 2000.

OTES

Barash, David P. and Webel, Charles P.; *Peace and Conflict Studies*, Sage Publications, London & New Delhi, 2002.

Basham, A. L. (ed.); *A Cultural History of India*, OUP, New Delhi, 1975.

Chandra, Satish; *Medieval India: From Sultanate to the Mughals*, Har-Anand Publications, New Delhi, 1999.

Galtung, Johan; *Conflict Transformation by Peaceful Means: The Transcend Method*, [Participants' Manual/Trainers' Manual], United Nations Disaster Management Training Programme, 2000.

Gandhi, Rajmohan; *Revenge and Reconciliation: Understanding South Asian History*, Penguin Books, New Delhi, 1999.

Habib, Irfan; *Medieval India: The Study of a Civilization*, National Book Trust, New Delhi, 2008.

Jeong, Ho-Won; *Peace and Conflict Studies: An Introduction*, Ashgate Publications, Burlington, 2000.

Reardon, Betty; *Educating for Global Responsibility: Teacher Designed Curricula for Peace Education*, Teacher College Press New York, 1988.

Chodosh, H. E., Bhatt, N. J., and Kassam, F.; *Mediation in India: A Toolkit*, United States Educational Foundation in India (USEFI), New Delhi, 2004.

Shaw, Malcolm N.; *International Law*, Cambridge University Press, New York & Delhi, 2008.



# UNIT 5 WOMEN'S EDUCATION: HISTORICAL AND POST-INDEPENDENCE PERSPECTIVE



**Structure**

5.0 Introduction
5.1 Unit Objectives
5.2 Influences of Ancient Scriptures on Women's Education
5.3 Socio-Religious Reforms and Women's Education
5.4 Colonial Policies and Women's Education
5.5 Constitutional Provisions, Fundamental Rights and Directive Principles of State Policy
5.6 Recommendations of Various Committees on Girl Education
  5.6.1 Committee on Women's Education (1957–59)
  5.6.2 Committee for Girls' Education and Public Cooperation (1963–65)
  5.6.3 Committee on the Status of Women (1971–74)
  5.6.4 National Policy on Education (1986) on Women's Education
  5.6.5 National Policy on Education Review Committee (1990)
  5.6.6 Programme of Action (1992) and Women's Education
5.7 New Educational Policy and Women's Education
5.8 Status of Women's Education
5.9 Summary
5.10 Key Terms
5.11 Answers to 'Check Your Progress'
5.12 Questions and Exercises
5.13 Further Reading

## 5.0 INTRODUCTION

Gender inequality and gender bias has been perennial problems confronting women in India. Discrimination and exploitation on the basis of gender constitutes a serious issue which clearly signifies that half of the human race is unable to realize its full potential and condemned to optimal standards of existence. One of the most serious impediments to women's development in India is lack of adequate educational facilities. Most women living in villages, and especially in remote areas of Rajasthan, Sikkim, Meghalaya, and Arunachal Pradesh and so on, never get the opportunity to read and write or communicate with people other than their family members. And this is the situation in the contemporary times. It was even worse before independence and for many years after independence as well.

It was only after the government started to place special focus on women's education and empowerment through industry, as per the schemes of the various Five-Year Plans, that many more adult women and girl children started to go to school and get at least primary education. This unit will introduce you to the various aspects of women's education in India, in historical as well as post-Independence periods.

## 5.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Trace the earlier influences of ancient scriptures on women's education
- Recall the socio-religious reforms and women's education
- Discuss colonial policies and women's education
- Identify the constitutional provisions, fundamental right and Directive Principles of State Policy related to women's education
- Describe the recommendations of various committees and commissions relating to girl education
- Discuss the new educational policy and women's education
- Explain the status of women's education, enrolment at different stages and literacy

## 5.2 INFLUENCES OF ANCIENT SCRIPTURES ON WOMEN'S EDUCATION

The Indian ancient scriptures are eternally relevant and useful for positive conduct of human life and all its aspects. They inspire us to lead better, more fruitful lives. The main characteristic of the Indian education system is that it has its roots in traditional teaching and learning process enshrined in these ancient scriptures. The Indian education system had a valuable collection of teaching methods and approaches. The major sources of information are found in the following ancient Indian scriptures.

- Four Vedas
- Six Vedangas
- Four Upvedas
- One hundred and eighty Upanishads
- Six systems of philosophy
- Bhagwad Gita
- Three Smritis

These are collectively known as the vedic literature. No study of the source of Indian culture, education, philosophy and thought is complete without an adequate acquaintance and understanding of the 'Vedic literature'. Vedic literature represents the most important and intrinsic part of life of the Indian history.

### Features of the Vedic Education System

1. **Free education:** In ancient, the India teaching was considered to be the holy duty which a Brahman was bound to discharge irrespective of any consideration of the fee. Teachers were expected to devote their lives to the cause of teaching in the missionary spirit of self-sacrifice, and the society laid down the principal that both the public and state should help the learned teachers and educational institutions very liberally. Society realized that 'Vidyadana' or the gift in the cause of education was to be the best of gifts, possessing a higher religious merit than even the gift of land. On the occasion of religious feats, students and teachers were invited and donations were given liberally.





2. **High status of teachers:** Teachers received the highest honour in the society, even by the kings. There was customary for kings to rise from their throne in order pay regard to great teachers such as Narada, Vashishtha and Vishwamitra.
3. **Teachers as parents:** Teachers are believed to be as parent to their pupils and pupils were expected to conduct as family member with complete obedience.
4. **Residential schools:** Teachers and pupils were used to live together and so that a better identification and bond is made with one another.
5. **Immediate aim:** The immediate aim of education was vocational in nature i.e. to enable students from different casts for the actual needs of life.
6. **Curriculum:** The subjects of instruction varied according to the vocational needs of the different castes from the Vedas and Vedangas in case of Brahmanas, to the art of warfare in the case of Kshatriyas, and to agriculture and trade, arts and crafts in the case of Vaishyas.
7. **Methods of instruction:** The methods of instruction generally consisted of recitation by the teachers and repetition by pupil, followed by explanation by the teacher, questioning by the pupil, and discussion between the teacher and the pupil.
8. **Individual teaching:** Pupils were tough individually not en masse by the class method.
9. **Method of study:** The method of study consisted in listening to the teacher, reflection on what has been listened to and its constant revision and discussion.
10. **Role of travel in education:** Travel was regarded as necessary to give a finish tough to education.
11. **Sanskrit as the medium of instruction:** The medium of instruction was Sanskrit.
12. **Self-control and Self-discipline:** It was considered to be the best discipline. However Corporal punishment was not altogether ruled out.
13. **Widespread education of women:** In the earlier Vedic and Upanishad times, girls were free to go through the 'Upanayana' ceremony, live a life of celibacy, studied Vedas, vedangas and other subjects along with their brother pupils.
14. **Ultimate aim of education-self-realization:** The ultimate aim of education in ancient India was not only acquisition of knowledge as soul component of preparation for life in materialistic world but for complete realization of self-for liberating of the soul from ties of life, both present and future. That knowledge was real, which led to emancipation-led from unreality to reality, from darkness to light, from death to immortality.

### Objectives of Vedic education

1. **Ultimate objective as moksha or self-realisation:** Ancient Indians believed that education should prepare an individual in such a way as to prepare him to attain the objective of liberation, i.e. to be one with the almighty and to be free from the cycle of births and deaths.
2. **Infusion of piety and religiousness:** In ancient Indi,a religion played a prominent part. Education aimed at the infusion of piety and religiousness in the minds of the pupils.

2. **Education for worldliness:** Happiness in other world was given more stress than the happiness in this world. This world according to them was unreal and full of fetters. The highest wisdom was a release from these betters.
3. **Character formation:** Education must form character. Mere intellect was not of worth if the person was devoid of not much morality. Morality or the right behaviour was the higher 'Dharma'. Education was regarded as a means of inculcating values such as strict obedience to elders, truthfulness, honesty and temperance.
4. **Development of all round personality:** Ancient Indians believed that personality should be developed through education. Personality was developed through the following methods:
   (a) Self-restraint
   (b) Self-confidence
   (c) Self-respect
   (d) Discrimination and judgement
5. **Stress on social duties:** A student was not supposed to lead a self-centered life. He was supposed to perform his duties as a son, as a husband, as a father and many other capacities conscientiously and efficiently in the society. His wealth was not for his own sake as for his family, and he had to be hospitable and charitable. All professions laid stress on civil responsibilities.
6. **Promotion of social efficiency and welfare:** The promotion of social efficiency and welfare was an equally important aim of education. Education was not imported simply for the sake of culture or for the purpose of developing mental powers but for the purpose of training every member of society in the profession which he expected to follow. Society had accepted the theory of division of work which was later on governed by the principle of heredity. Each family trained its children in its own profession. The purpose was to make each individual society efficient.
7. **Preservation and promotion of culture:** the preservation and promotion of national culture and heritage was also stressed. "The services of the whole community were conscripted for the purpose of the preservation of the Vedic literature. Every person had to learn at least a portion of his sacred literacy heritage." A section of Brahman as had to devote the whole of their life to the cause of learning to commit the Vedas to memory in order to ensure preservation.

## Education of Women

The Vedas give a very honourable and respectable status to women. They were eligible for higher education for the study of the Vedas and the performance of administrative and other important jobs mostly performed by men even today.

Boys should go to the schools meant for boys and girls should go to the schools where there are women teachers. The women should have opportunity to attain knowledge of the Vedas from all the four concerns.

## Teachers as spiritual as well as intellectual guide

Teacher occupied a pivotal position in the Vedic system of education. The teacher was a parent surrogate (parent substitute), a facilitator of learning, exemplar and



inspirer, confident, detector, friend and philosopher moral educator, reformer, evaluator, character and personality builder, importer of knowledge and wisdom and above all a guru, religious and spiritual guide. The relationship between the teachers and pupil was regarded as filial in character. Teacher was the spiritual father of his pupils. In addition to imparting intellectual knowledge to them, he was also morally responsible. He was always to keep a guard over the conduct of his pupils. He must let them know what to cultivate and what to avoid. He must instruct them as how to sleep and as to what food they may take and what they may reject. He should advise them as to the people whose company they should keep and as to which of the villages and localities they should frequent. During the Vedic period learning was transmitted orally from one generation to another. Great importance was attached to the proper accent and pronunciation in the Vedic recitation and these could be correctly learnt only from the lips of a properly qualified teacher. The spiritual solution depended almost entirely upon the proper guidance of a competent teacher.

## Process of Instruction

There were three steps in instruction:

1. *Sravana*: Sravana is listening to words uttered by the teacher.
2. *Manana*: Manana is the process of remembering or pondering the topic taught.
3. *Nididhyasana*: Nididhyasana represents the highest stage of contemplation and deep thought.

## Admission and evaluation system

There seems to be no direct reference available to explain the methodology followed by the Acharya to judge the adequacy of knowledge of his pupils. Yaskas and Sayana, famous commentators on the Vedas, have inferred from the Rig Veda hymn that the students were given three grades as under:

1. *Maha prazanan* grade: Students of very high ability
2. *Madhyama prazanan* grade: Students of high ability
3. *Alpa prazanan* grade: Students of low ability

## Autonomy of educational institutions

Teachers in the Vedic period were autonomous in their work and they followed various methods of admission and assessment. A teacher was the sole pedagogic authority to decide whether the student was fit for admission and also to decide whether he had completed his studies.

## Studentship

There is a long hymn in the 'Atharva Veda' describing the ceremony pertaining to studentship. The initiation ceremony was called Upanayana which lasted three days. It laid down the foundation of a planned life. The pupil owed his first birth (physical) to his parents and the second birth (spiritual) to his teacher. The rite of Upanayana was meant to purify body and mind and to make one fit for receiving education.

After 'Upanayana' the pupil entered into a state of 'Brahmacharya' indicating that it was a mode of life, and a system of education. The 'Brahmachari' as the aspirant for education was now called, lived according to prescribed regulations, i.e., physical discipline as well as spiritual discipline.

## Curriculum

According to recent researches, following disciplines were included in the curriculum in the graded forms in accordance with the stages of education.

1. Anthropology
2. Astronomy
3. Economics
4. Epistemology
5. Eschatology
6. Ethnology
7. Geology
8. Human eugenics
9. Mathematics
10. Military Science

The system of education was well-organized. It was suited to the needs of the society education was considered as the greatest gift in ancient India. It was aimed at the development of personality of an individual to his maximum extent. Education helped in the realization of spiritual and moral values, besides preparing for worldly pursuits. It was freely available to all those who wanted the relations between teachers and the pupils were based on respect and affection. They were very cordial and open in their interactions with each other.

## 5.3 SOCIO-RELIGIOUS REFORMS AND WOMEN'S EDUCATION

Change is law of nature and an essential ingredient of man's evolutionary process. Man's love for change is inherent, natural and instinctive. Man is both conservative as well as dynamic. He may cling tenaciously to the inherited norms and values, yet he always revels in change in outlook, techniques and experiences. At times these changes are slow that people do not even perceive them. However, there are times when they are rapid and drastic.

Socio-religious reforms can be defined as deliberate attempt to change or to modify processes, patterns, interactions or organisations of society or religion or both in order to bring about well-being. It is modification in the ways of doing and thinking of people, which begins with small number of people and with course of time accepted by larger population.

India has a great history of socio-religious reforms. Various factors led to socio-religious reforms in Indian society. The contemporary Indian social system was associated with religion. Naturally social reforms and religious reforms were complementary to each other. A lot of socio-religious reform movements took place in the nineteenth century. Social evils like *Parda* system, restrictions on widow remarriage, sati system, female infanticide, polygamy, polytheism etc., were aimed to reforms. Superstition, dogmas, religious rigidities, idolatry, caste hierarchy, obscurantism were also reformed. Western influences and education played an important role in all these reforms. Modern science, rationality and the conclusion of humanism were the vital factors that influenced all the reformers. In nineteenth century these reforms came through various organizations and institutions, like in Hindu religion, the Brahma Samaj and Arya Samaj, in Muslim religion, Ahmadia and Aligarh movement, in Parasi, Rahnumai Majdayasan Sabha and in Sikh religion, Akali movement came into existence.

Raja Ram Mohan Roy pioneered this reform movement. He opposed social practices such as discrimination on the basis of caste, untouchability, superstitions and the custom of 'sati'. He believed in a free press and wanted English language to be introduced in India. He also supported widow remarriage and women's education. In the religious field, he opposed idol worship and meaningless rituals. He set up the Brahmo Samaj to fight these evils.

Henry Vivian Derozio started the Young Bengal Movement. He was a radical reformist and condemned many socio-religious beliefs. He also pressed for the education of women.

Another reformer was Ishwar Chandra Vidyasagar. He did a great deal of work in the field of education and reforms for women.

Swami Dayanand Saraswati also worked for reforms through the Arya Samaj. He laid emphasis on the Vedas.

Ramakrishna Paramhansa was a religious reformer. His disciple was Swami Vivekananda. He was fascinated by the Indian culture and wanted the Indians to work hard. He established the Ramakrishna Mission in AD 1897.

Annie Besant worked for social reforms. She was a leading member of the Theosophical Society.

In western India, the movement for reforms was led by Mahadev Govind Ranade, Ramakrishna Bhandarkar, Gopar Hari Deshmukh, Jyotirao Phule and Ramabai Ranade. All of them worked for the upliftment of women and so-called lower castes.

The reform movement in the South was led by the Veda Samaj. Some of the leaders of the reform movement in this part were Chembeti Sridharalu Naidu, Kandukuri Veerasalingam and Sree Narayana Guru.

Reforms among the Muslims were introduced by Sir Syed Ahmad Khan. He established the Mohammedan Anglo-Oriental College at Aligarh in AD 1875.

Naoroji Furdoonji, Dadabhai Naoroji and Sorabji Bengali were reformers among the Parsis.

Reform movements were also active among the Sikhs. The Singh Sabhas, the Khalsa College, the Akali Dal and the Shiromani Gurdwara Prabandhak Committee were instrumental in introducing reforms.

The government was indifferent towards the cause of reforms. However, the acts of AD 1872, AD 1891 and AD 1929 did bring some changes.

Education was neglected. The Wood's Despatch of AD 1854, however, did introduce some reforms in education. Still, education remained backward. To spread education, Indians also became involved in this field.

Cultural awakening came in India with the rediscovery of past glory. Literature and art grew. The press also made rapid strides. Science, which was so far neglected, began to be studied.



**Check Your Progress**

1. What are the ancient scriptures collectively known as?
2. What was the status of teachers in ancient India?
3. How do Vedas regard women?
4. What were the three grades of students as per the Vedas?
5. Define socio-religious reforms.

## 5.4 COLONIAL POLICIES AND WOMEN'S EDUCATION

In colonial India, the social status of women was dependent on the men. The religion, traditions and customs all were credited with how a woman should behave to men in all matter. Women were kept aloof from all the opportunity of education. Except a few women of aristocrat families, the life of common women was not worth living. The social justice and equality was not for them. Due to lack of education there was ignorance of even basic rights.

The first and foremost effort for the betterment and upliftment of Indian women was made by Christian missionaries when British Empire was spreading it roots in India. Although the usual perception regarding special efforts was that it meant conversion to Christianity, in reality, with the help of government, many schools, dispensaries and orphanages were opened to help needy people.

Women's education was the first concern of the social workers. In addition to right for education, abolition of the cruel custom of sati and infanticide, condemnation of child marriage and polygamy was a result of colonial government's interference.

Until 1854, all the basic efforts were by Christian missionaries as the British government was little reluctant due to local social ideologies about women's education. British administrators were playing politically safe by being social and gender neutral. It was, Lord Dalhousie, Governor-General of India (1848–1856), who made a point that 'no single change was likely to produce more important and beneficial changes than female education.' This statement reveals the resolved viewpoint of British Government. After that in 1854 Wood's Dispatch Commission by Sir Charles Wood was modeled which exactly stated 'The importance of female education in India cannot be overrated; and we have observed with pleasure the evidence which is now afforded of an increased desire on the part of many of the natives to give a good education to their daughters.'

But the actual commencement and application of Wood's Dispatch at grassroots level was too difficult. Religious traditions were too strong for open minded acceptance by the mass. Only a small number of women went for basic schooling who are either from lower strata of society or they were converted Christians. Aristocrat and political families were reluctant due to diplomatic reasons. By 1854, there were approximately 626 girl's schools with only 21,755 students. Which is not very significant number but still the efforts brought shift in attitude towards women education. Many Indian reformers—Raja Rammohan Roy, Gandhi, Tagore, Vivekananda—initiated movements to support women's education.

The Education Commission in 1882-1883 incorporated public funds for backing up women's schools. These public funds include liberal grants-in-aid, the offer of freeships, the scholarship, the raising up a class of women for teaching girls through various plans, etc., but due to a stage of fiscal severity, the government could not instantly allocate sufficient grants.

To recover the failures of Wood's Education Dispatch in 1854, in 1884 The Education Commission by William Hunter was modeled. The major transition was shift of responsibility of education to Indian control, with supervision of British Government. Although this was a huge step but still many people frowned on women education. However, the British colonial policies were partially successful in erecting a strong education system for women but fully successful in bringing the shift in attitude, although only among Indian social reformers.





## 5.5 CONSTITUTIONAL PROVISIONS, FUNDAMENTAL RIGHTS AND DIRECTIVE PRINCIPLES OF STATE POLICY

Fundamental Rights and directive principles are vital units of the Indian Constitution; it was designed in 1947-49. These are sections which are credited with major obligations of government of India towards its citizens and the fundaments responsibilities of the citizens towards the country. Also, these sections have constitutional bills which credit the government with the right for policy making and expected moral conduct of the citizens.

The Fundamental Rights are defined as the basic dues which all the citizens have on the ground of humanity. These rights, defined in Part III of the Constitution, are applicable to each and every citizen irrespective of race, place of birth, religion, caste, creed or sex. The courts of India have responsibility for enforcement of these rights and also have creditability to restrict the rights under national/local emergencies.

### Right to Equality

The Right to Equality is one of the foremost pledges of the Constitution. It is stated in Articles 14–16, which collectively hold the universal code of equality before law and non-discrimination.

Article 14 promises fairness before law as well as equal defence of the law to all citizens within the territory of Indian government. This also includes the equal domination of all citizens to the authority of law. The Article authorizes the government of India to categorize citizens for lawful purposes, provided there is a rational basis for doing so, i.e. the categorization must be non-arbitrary.

Article 15 bans bias on the bases of religion, race, caste, sex, place of birth, or any of them. This right is obligatory to the State as well as all citizens, with respect to free access to places of public entertainment or places of public resort maintained partly or wholly out of State funds. However, the State is not barred from making special provisions for women and children or any socially and educationally backward classes of citizens, including the Scheduled Castes and Scheduled Tribes. This exception has been provided since the classes of people mentioned therein are considered deprived and in need of special protection.

Article 16 guarantees equality of opportunity in matters of public employment and prevents the State from discriminating against anyone in matters of employment on the grounds only of religion, race, caste, sex, descent, place of birth, place of residence or any of them. It creates exceptions for the implementation of measures of affirmative action for the benefit of any backward class of citizens in order to ensure adequate representation in public service, as well as reservation of an office of any religious institution for a person professing that particular religion.

### Right to Freedom

Article 19-22 are enshrined with the Right to Freedom, with the vision of guaranteeing discrete right, which is essence of an independent country.

Article 19 guarantees six liberties in the nature of civil rights, which are available only to citizens of India. These include the freedom of speech and expression, freedom of assembly, freedom of association without arms, freedom of movement throughout the territory of India, freedom to reside and settle in any part of the country of India and the freedom to practice any profession. Also, the article assigns authority to state to restrict these liberties under rational reasons. The bases of these restrictions must be one or more or all of the following: national security, public order, decency and morality, contempt of court, provocation to offences, and defamation.

The freedoms guaranteed by Article 19 are further pursued to be protected by Articles 20–22. The scope of these articles, particularly with respect to the doctrine of due process, was heavily debated by the Constituent Assembly.

### Right against Exploitation

The *Right against Exploitation* is explained in Articles 23–24; it lays down assured provisions to weaker sections of the society against exploitation by individuals or the State. Article 23 bans human trafficking, declaring it as a crime punishable by law, and also prohibits forced labour or any act of compelling a person to work without wages. Also, it permits the State to impose compulsory service for public purposes, including call-out for Defence services in war state. The Bonded Labour Abolition Act, 1976, has been endorsed by Parliament to give effect to this Article. Article 24 prohibits the employment of children below the age of fourteen years in factories, mines and other hazardous jobs. Parliament has enacted the Child Labour (Prohibition and Regulation) Act, 1986, providing regulations for the abolition of, and penalties for employing, child labour, as well as provisions for rehabilitation of former child labourers.

### Right to Freedom of Religion

Every individual is free to change his/her religion according to his/her wish and no individual can force any person to change his/her religion. The Right to Freedom of Religion, covered in Articles 25–28, provides religious freedom to all citizens and ensures a secular state in India. According to the Constitution, there is no official State religion, and the State is required to treat all religions impartially and neutrally. Article 25 guarantees all persons the freedom of conscience and the right to preach practice and propagate any religion of their choice. This right is, however, subject to public order, morality and health, and the power of the State to take measures for social welfare and reform. The right to propagate, however, does not include the right to convert another individual, since it would be a violation of the other's right to freedom of integrity.

### Cultural and Educational Rights

The Cultural and Educational rights, stated in Articles 29 and 30, are provide right to all the citizens to get education and right to conserve their cultural heritage. Article 29 grantees that any section of citizens having a distinct language, script culture of its own have the right to conserve and develop it, and also protects the rights of minorities by preventing the State from imposing any external culture on them. It alsoforbids bias against any citizen for admission into any educational institutions maintained or aided by the State, on the grounds only of religion, race, caste, language or any of them. However, this is subject to reservation of a reasonable number of seats by the State for socially and educationally backward classes, as well as reservation of up to 50 per cent of seats in any educational institution run by a minority community for citizens belonging to that community.

Article 30 confers upon all religious and linguistic minorities the right to set up and administer educational institutions of their choice in order to preserve and develop their own culture, and prohibits the State, while granting aid, from discriminating against any institution on the basis of the fact that it is administered by a religious or cultural minority. The term 'minority,' while not defined in the Constitution, has been interpreted by the Supreme Court, any community which numerically forms less than 50 per cent of the population of the state in which it seeks to avail the right under Article 30. In order to claim the right, it is essential that the educational institution must have been established as well as administered by a religious or linguistic minority. Further, the right under Article 30 can be availed of even if the educational institution established does not confine itself to the teaching of the religion or language of the minority concerned, or a majority of students in that institution do not belong to such minority. This right is subject to the power of the State to impose reasonable regulations regarding educational standards, conditions of service of employees, fee structure, and the utilisation of any aid granted by it.

### Right to constitutional remedies

Right to constitutional remedies empowers the citizens to approach a court of law in case of any denial of the fundamental rights. For instance, in case of imprisonment, the citizen can ask the court to see if it is according to the provisions of the law of the country. If the court finds that it is not, the person will have to be freed. This procedure of asking the courts to preserve or safeguard the citizens' fundamental rights can be done in various ways. The courts can issue various kinds of *writs*. These writs are *habeas-corpus*, *mandamus*, *prohibition*, *quo-warranto* and*certiorari*. When a national or state emergency is declared, this right is suspended by the central government.

The Directive Principles of State Policy are the background guidelines for the enclosing laws by the government. These principles are stated in Part IV of the Constitution. Unlike fundamental rights, these principles are not enforceable by the courts, but these principles are the foundation on which all laws are formed.

The state is expected to keep these principles in mind while framing laws and policies, even though they are non-justiciable in nature. The Directive Principles may be classified under the following categories: ideals that the State ought to strive towards achieving; directions for the exercise of legislative and executive power; and rights of the citizens which the State must aim towards securing.

Article 37, while stating that the Directive Principles are not enforceable in any court of law, declares them to be 'fundamental to the governance of the country' and imposes an obligation on the State to apply them in matters of legislation. Thus, they serve to emphasise the welfare state model of the Constitution and emphasise the positive duty of the State to promote the welfare of the people by affirming social, economic and political justice, as well as to fight income inequality and ensure individual dignity, as mandated by Article 38, in order to ensure equitable distribution of land resources.

Article 39 lays down certain principles of policy to be followed by the State, including providing an adequate means of livelihood for all citizens, equal pay for equal work for men and women, proper working conditions, reduction of the

concentration of wealth and means of production from the hands of a few, and distribution of community resources to 'sub serve the common good'. These clauses highlight the Constitutional objectives of building an egalitarian social order and establishing a welfare state, by bringing about a social revolution assisted by the State, and have been used to support the nationalisation of mineral resources as well as public utilities. Further, several legislations pertaining to agrarian reform and land tenure have been enacted by the federal and state governments, in order to ensure equitable distribution of land resources.

Articles 41–43 mandate the State to endeavour to secure to all citizens the right to work, a living wage, social security, maternity relief, and a decent standard of living. These provisions aim at establishing a socialist state as envisaged in the Preamble. Article 43 also places upon the State the responsibility of promoting cottage industries, and the federal government has, in furtherance of this, established several Boards for the promotion of khadi, handlooms etc., in coordination with the state governments. Article 39A requires the State to provide free legal aid to ensure that opportunities for securing justice are available to all citizens irrespective of economic or other disabilities. Article 43A mandates the State to work towards securing the participation of workers in the management of industries. The State, under Article 46, is also mandated to promote the interests of and work for the economic uplift of the scheduled castes and scheduled tribes and protect them from discrimination and exploitation. Several enactments, including two Constitutional amendments, have been passed to give effect to this provision.

Article 44 encourages the State to secure a uniform civil code for all citizens, by eliminating discrepancies between various personal laws currently in force in the country. However, this has remained a 'dead letter' despite numerous reminders from the Supreme Court to implement the provision. Article 45 originally mandated the State to provide free and compulsory education to children between the ages of six and fourteen years, but after the 86th Amendment in 2002, this has been converted into a Fundamental Right and replaced by an obligation upon the State to secure childhood care to all children below the age of six. Article 47 commits the State to raise the standard of living and improve public health, and prohibit the consumption of intoxicating drinks and drugs injurious to health. As a consequence, partial or total prohibition has been introduced in several states, but financial constraints have prevented its full-fledged application. The State is also mandated by Article 48 to organise agriculture and animal husbandry on modern and scientific lines by improving breeds and prohibiting slaughter of cattle. Article 48A mandates the State to protect the environment and safeguard the forests and wildlife of the country, while Article 49 places an obligation upon the State to ensure the preservation of monuments and objects of national importance. Article 50 requires the State to ensure the separation of judiciary from executive in public services, in order to ensure judicial independence, and federal legislation has been enacted to achieve this objective. The State, according to Article 51, must also strive for the promotion of international peace and security, and the Parliament has been empowered under Article 253 to make laws giving effect to international treaties.

**Check Your Progress**

6. Who made the first effort for betterment of Indian women in colonial India?
7. What is the right against exploitation?
8. What are directive principles?



## 5.6 RECOMMENDATIONS OF COMMITTEES ON GIRL EDUCATION

Women's Education: Historical and Post-Independence Perspective

NOTES

Education can be used as the catalyst in bringing around change in the status of women. In order to neutralize the accumulated distortions of the past, there is now a well-conceived edge in favor of women. The national education system now plays a positive and interventionist role in the empowerment of women. It now fosters the development of new values through redesigned curricula and textbooks; training and orientation of teachers; decision-makers and administrators; and active involvement of educational institutions. Women's studies is now being promoted as a part of various courses, and educational institutions are being encouraged to take up active programmes for further development of Indian women.

In recognition of the importance of education of women in accelerating socio-economic development, the government formulated a variety of measures from time-to-time in this direction. Some of the government initiatives have been discussed below.

### 5.6.1 Committee on Women's Education (1957–59)

At its meeting held in July 1957, Education Panel of the Planning Commission recommended, 'a suitable committee should be appointed to go into the various aspects of the question relating to the nature of education for girls at the elementary, secondary and adults stages and to examine whether the present system was helping them to lead a happier and more useful life'. This recommendation was placed before the Conference of the State Education Ministers (held in September 1957). They agreed that a special committee should be appointed to examine the issue of women's education. Accordingly, the National Committee on Women's Education was set up the Government of India in the Ministry of Education.

#### Terms of reference

The terms of reference of National Committee on Women's Education were to:

(a) Suggest special measures to make up the leeway in women's education at the primary and secondary levels.

(b) Examine the problem of wastage in girls' education at these levels.

(c) Examine the problems of adult women who have relapsed into illiteracy or have received inadequate education and who need continuation of education so as to earn a living and participate in projects of national reconstruction.

(d) Survey the nature and extent of material and other facilities offered by voluntary welfare organizations for education of such women and to recommend steps necessary to enable them to offer larger educational facilities to them.

#### Major recommendations

The major recommendations of National Committee on Women's Education have been given below.

#### A. Special recommendations needing top priority

(i) *Determined efforts:* The education of women should be regarded as a major and a special problem in education for a good many years to come, and bold

and determined efforts should be made to face its difficulties and magnitude, and to close the existing gap between the education of men and women in as short a time as possible. The funds required for the purpose should be considered to be the first charge on the sums set aside for the development of education.

(ii) *National council:* Steps should be taken to constitute as early as possible a National Council for the education of girls and women.

(iii) *Rapid development:* The problem of the education of women is so vital and of such great national significance that it is absolutely necessary for the Centre to assume more responsibility for its rapid development.

(iv) *State council:* The state governments should establish state councils for the education of girls and women.

(v) *Comprehensive plans:* Every state should be required to prepare comprehensive development plans for the education of girls and women in its area.

(vi) *Cooperation:* It is also necessary to enlist the cooperation of all semi-official organizations, local bodies, voluntary organizations, teachers' organizations, and members of the public to assist in the promotion of the education of girls and women.

(vii) *Permanent machinery:* The Planning Commission should set up a permanent machinery to estimate, as accurately as possible, the woman-power requirements of the Plans from time to time, and make the results of its studies available to the government and the public.

## B. Other special recommendations

The other special recommendations of National Committee on Women's Education have been given below.

(i) *Primary education (age group 6–11)*

- Concessions in kind (not in cash) should be given to all girls, whether from rural or urban areas, of parents below a certain income level.
- The government should formulate a scheme for awarding prizes to the village which shows the large proportional enrolment and average attendance of girls.

(ii) *Middle and secondary education (age group 11–17)*

- At the middle school stage, more and more co-educational institutions should be started.
- Separate schools for girls should be established specially in rural areas, for the secondary stage, at the same time giving parents full freedom to admit their girls to boys' schools if they so desire.
- All girls (and all boys also) of parents with income below a prescribed level should be given free education up to the middle stage.
- Free or subsidized transport should be made available to girls in order to bring middle and secondary schools, within easy reach.

(iii) *Curriculum and syllabi*

- There should be identical curriculum for boys and girls at the primary stage with the provision that, even at this stage, subjects like music, painting, sewing, needle work, simple hand-work, and cooking should be introduced to make the courses more suitable for girls.
- At the middle school stage, and more especially the secondary stage, there is a need for differentiation of curricula for boys and girls.

(iv) *Training and employment*

- Immediate steps should be taken to set up additional training institutions for women teachers in all such areas of the country where there is a shortage.
- With a view to inducing women from urban areas to accept posts of teachers in rural schools, women teachers serving in rural areas may be provided with quarters and a village allowance may be given to such teachers.

  Age of retirement may be extended to sixty, provided the teacher is physically and otherwise fit.

(v) *Professional and vocational education*

- The employment of women on part-time basis, wherever feasible, should be accepted as a policy.
- Girls should be encouraged to take up courses in commerce, engineering, agriculture, medicine, etc., at the university stage by offering them scholarships and other concessions.
- It is important to organize campaigns to mobilize public opinion for creating proper conditions in offices and establishments in which women can work freely.

(vi) *Facilities for adult women*

- Education facilities in the form of condensed courses (1) that prepare women for the middle school examination, and (2) those that prepare them for the high school or higher secondary examination should be provided more extensively in all stages.
- Provision should also be made of condensed courses, which train women for suitable vocation after completion of necessary education.

(vii) *Voluntary organization*

The services of the voluntary organizations should be extensively used in the field of middle, secondary, higher, social and vocational education of women. The existing grant-in-aid codes of the states need a thorough revision. There should be a substantial and significant difference in the rates of grants-in-aid as between girls' institutions and boys' institutions at all levels. The conditions of aid for girls' institutions should be made easier.

## C. General recommendations

The general recommendations of National Committee on Women's Education have been given as follows:

(i) *Free primary education:* Whenever primary education is not free, immediate steps should be taken to make if free.

(ii) *Wastage and stagnation:* The Ministry of Education should carry out special studies of this problem in all parts of the country. The following steps should be taken to reduce the extent of stagnation in class I:

- All fresh admissions to class I should be made in the beginning of the year and not later than sixty days after the beginning of the first session.

- It should be a specific responsibility of teachers to see that proper attendance is maintained in the school.
- The age of admission should be raised to six plus.
- Standards of teaching should be improved.

The stagnation in classes II to V can be reduced if:

- Attendance requirement of children is increased
- Standards of teaching are improved
- Internal examinations are introduced
- Books and educational equipment needed by poor children are supplied in good time.

About 65 per cent of cases of wastage at the primary level are due to financial conditions of the families. It can be illuminated only if provision for part-time instruction is made for those children who cannot attend school on a whole-time basis.

About 25 to 30 per cent of the cases of wastage at the primary level are due to the indifference of parents. This can be eliminated partly by educative propaganda and partly by a rigorous enforcement of the compulsory education law.

(iii) *Employment of teachers*

- The present scales of pay of teachers should be suitably revised.
- There should be no distinction between the scales of pay and allowances paid to teachers in the government and local board or municipal institutions and those that are paid to teachers working under private managements.
- The triple-benefit scheme called the Pension-cum-Provident Fund-cum-Insurance Scheme should be made applicable to every teacher who is employed permanently in an institution.

### 5.6.2 Committee for Girls' Education and Public Cooperation (1963–65)

At its meeting held in April 1963, the National Council for Women's Education endorsed the suggestion made by the Union Education Ministry that a small committee be appointed to look into the causes for lack of public support, particularly in rural areas, for girls' education and to enlist public cooperation. The Chairman of the National Council for Women's Education accordingly appointed, in May 1963, a committee to suggest ways and means of achieving substantial progress in this field. This committee was named Committee for Girls' Education and Public Cooperation. The Committee submitted its report in 1964 and it was published in 1965.

**Recommendations**

Committee for Girls' Education and Public Cooperation realized that it is only through a willing, educated and informed public that any progress can be made. Not only is the need urgent, but the ground is also ready for a comprehensive programme for mobilizing public cooperation to promote girls' education and giving it constructive channels for expression. It is essential that official action and the programme based on public initiative must move forward in close harmony. There has to be a sense of partnership and shared responsibility between official and voluntary agencies. There



is also the need for a systematic and sustained programme with an adequate organization for mobilizing community effort.

(i) *Public cooperation:* Direct cooperation from the public should be encouraged in:

- Establishing private schools
- Putting up schools buildings
- Contributing voluntary labour for construction of school buildings
- Helping in the maintenance of school buildings
- Helping in providing suitable accommodation for teachers and students, particularly in the rural areas
- Popularizing co-education at the primary stage
- Creating public opinion in favour of the teaching professions and to give greater respect to the teacher in the community
- Undertaking necessary propaganda to make the profession of teaching for women popular
- Encouraging married women to take up at least part-time teaching in village schools and to work as school mothers
- Initiating action and participating in educative propaganda to break down traditional prejudices against girls' education
- Setting up and organizing school betterment committees, improvement conferences
- Supplying mid-day meals
- Supplying uniforms to poor and needy children
- Supplying free textbooks and writing materials to needy children

(ii) *State councils for women's education:* These are the most suitable agencies for providing the organization and leadership for mobilizing community effort. They should function as a part of the network of which the District Councils at the district level, and the Mahila Mandals and similar voluntary bodies at the town and village levels would be strong and active links. These agencies should look upon mobilizing of community effort and enhancing public opinion on promoting girls' education as the primary responsibility. They should aim at building up in villages and towns, teams of voluntary workers, men and women, who are willing to devote themselves to this cause and work actively for its promotion.

(iii) *State's responsibility:* The state should make public opinion in favour of girls' education through—

- School improvement conferences
- Seminars
- Radio talks, audio-visual aids and distribution of informative pamphlets.
- Enrolment drives, generally in June, and special additional drives for girls' education during Dussehra.
- Assisting voluntary, welfare and other organizations, private individuals and associations engaged in the field of education of girls and women.

(iv) *School improvement conferences:* These should be arranged widely throughout the states, and particularly in the less advanced states, in order to encourage people to contribute to educational awakening and advancement.

(v) *State help:* The state should continue to help in an abundant measure in providing necessary schooling facilities in all the areas and in the habitations, however small, so that the local population can make use of them.

(vi) *Pre-primary schools:* It is necessary that in rural areas particularly pre-primary schools should be attached to primary schools so that children get accustomed to schooling even at the tender age.

(vii) *Reform and inspection:* The existing functional deficiencies of schools should be remedied by replacing buildings which are totally inadequate for modern educational needs. There should be periodical inspection of school buildings and hostels so as to ensure their structural soundness and suitable sanitary facilities.

(viii) *More attractive school work:* School work should be made more attractive and should present education in terms more acceptable to pupils.

(ix) *Recruitment of women teachers:* Concerted efforts have to be made to recruit as many women teachers as possible. Women are in general considered to be better teachers for the primary classes in schools. It should be the aim of all states to appoint women teachers in primary schools and a greater number of women teachers in mixed schools. A school staffed by women will inspire greater confidence in the parents and make them willing to send their children to mixed institutions. The recommendations in this regard are as follows:

- *Conditions of recruitment:* The basis of recruitment of women teachers should be widened and their conditions of work should be made more attractive. Financial incentives like special allowances for hilly, isolated or any other specific backward rural areas should be given to teachers. Each state may specify areas where such allowances would be available.
- *Married women teachers:* Attempt should be made to bring back to the teaching profession married women who have left it in recent years and to bring women from other occupations to supplement the teaching staff.
- *Condensed courses:* Condensed courses should be organized on a large scale for adult women, particularly from rural areas, so that they could take up teaching jobs in the villages.
- *Recruitment age limit:* In order to attract more women teachers, the age limit for the unmarried and married women teachers should be relaxed in the case of those working in village schools. The service conditions of such married women who do part-time teaching work should be made more attractive.
- *Posting:* As far as possible, women teachers should be posted in or near their own villages.
- *Pay scales:* The pay scales of all teachers should be improved and the teachers should be paid an economic wage, so that they may be retained in the profession.
- *Special attention:* Special drives should be organized to attract people in rural areas to the teaching profession as the best form of social service needed for the upliftment of the villages.
- *Training schools:* Training schools, with hostels, need to be located in the rural centres and near 'different' areas where girls from the villages are trained and sent back to work in their own or neighbouring villages.



- *Training:* During selection of trainees for training schools and colleges, special preference should be given to women from rural areas seeking admission.
- *Adequate facilities:* The training facilities available in each state should be of such a magnitude that the annual output of trained teachers would be equal to the demand for additional teachers.
- *Inspection:* The inspecting staff should be adequate and strong if improvement is to be secured and waste reduced. A separate woman inspectorate will help to bring in more girls to school.
- *Lodging:* It is only by providing women teachers with quarters near the schools that many educated women can be attracted to the teaching profession.
- *Hostels:* The construction of hostels should be included as one of the priority objectives in the Plans of the states, and necessary financial assistance for the construction of hostels and maintenance stipends be made available more liberally to local authorities and voluntary organizations working in the field of education of girls and women.

(x) *Building and equipment:* Local bodies should be made responsible for the provision of school buildings, equipment, playing fields and the like and observance of the educational code in the state.

(xi) *Social education:* In the field of social education, a determined effort should be made to increase the number of literacy classes for women in rural areas and to carry out intensive campaigns for the spread of literacy among women. Activities in this field should be administered by the education departments of the state governments.

(xii) *Central assistance:* Such central assistance should be:

- At the elementary stage for: (1) preparation and employment of women teachers; (2) grant of free books, writing material and clothing to girls; and (3) twin quarters for women teachers.
- At the secondary stage for: (1) provision of separate schools for girls; (2) hostels; (3) grant of free books, writing materials and clothing to girls; and (4) preparation and appointment of women teachers in increasing numbers.

(xiii) *Compulsory education:* Compulsory Education Act should be introduced in states where it does not exist. In addition, state governments should provide sufficient incentives and carry on propaganda to attract all children to school.

(xiv) *Curriculum:* While the curriculum can be the same for both boys and girls at the primary and middle stages, provision should be made for offering of electives comprising subjects which would be of special interest to girls and which would help them later in their fields of activity.

(xv) *Shift system:* In schools that lack accommodation, but have a rush of admission, the double shift system may be tried as a temporary measure.

(xvi) *Seasonal adjustment:* Changing of school hours and school holidays to seasonal requirements has been found in some places to be a helpful concession to parents who would otherwise not be in a position to spare the children for attending classes.

### 5.6.3 Committee on the Status of Women (1971–74)

Various new problems relating to the advancement of women which had not been visualized by the Constitution makers and the government in earlier days had emerged. Therefore, with the changing social and economic conditions in the country, the Government of India felt that a comprehensive examination of all questions relating to the rights and status of women would provide useful guidelines for the formulation of social policies including education. For this purpose, the Government of India, Ministry of Education and Social Welfare, constituted Committee on the Status of Women on 22 September 1971. The Committee submitted its report entitled 'Towards Equality' in December 1974.

**Terms of reference**

The terms of reference of the Committee on the status of women were to:

(a) Examine the constitutional, legal and administrative provision that have a bearing on the social status of women, their education and employment.

(b) Assess the impact of these provisions during the last two decades on the status of women in the country, particularly in the rural sector, and to suggest more effective programme.

(c) Consider the development of education among women, and determine the factors responsible for the slow progress in some areas.

(d) Survey the problems of the working women including discrimination in employment and remuneration.

(e) Examine the status of women as housewives and mothers in the changing social status and their problems in the sphere of further education and employment.

(f) Undertake surveys on case studies on the implications of the population policies and family planning programmes on the status of women.

(g) Suggest any other measure which would enable women to play their full and proper role in building up the nation.

**Recommendations**

The recommendations of Committee on the Status of Women have been discussed below.

**A. Co-education**

(i) Co-education would be adopted as the general policy at the primary level.

(ii) At the middle and secondary stages, separate schools may be provided in areas where there is a great demand for them.

(iii) At the university level, co-education should be the general policy and opening of new colleges exclusively for girls should be discouraged.

(iv) There should be no ban on admission of girls to boys' institutions.

(v) Wherever separate schools/colleges for girls are provided, it has to be ensured that they maintain required standards in regard to the quality of staff, provision of facilities, relevant courses and co-curricular activities.

(vi) Acceptance of the principle of mixed staff should be made a condition of recognition for mixed schools. This measure may be reviewed a few years after it is implemented.



(vii) Wherever there are mixed schools, separate toilet facilities and retiring rooms for girls should be provided.

**B. Curricula**

(i) There should be a common course of general education for both sexes till matriculation.

(ii) At the primary stage, simple needle craft, music and dancing, should be taught to both sexes.

(iii) From the middle stage, differences may be permitted under work experience.

(iv) In Classes XI-XII, girls should have full opportunity to choose vocational and technical courses according to local conditions, needs and aptitudes.

(v) At the university stage, there is a need to introduce more relevant and useful courses for all students.

**C. Pre-school education**

(i) The provision of three-year pre-school education for children by making special effort to increase the number of 'balwadis' in the rural areas and in urban slums.

(ii) In order to enable them to fulfil the social functions discussed above, an effort should be made to locate them as near as possible to the primary and middle schools of the locality.

**D. Universalization of education (age group 6–14)**

(i) Provision of primary schools within walking distance from the home of every child in the next five years.

(ii) Establishment of ashram or residential schools to serve clusters of villages scattered in difficult terrains. Where this is not immediately possible, preparatory schools may be provided for the time being.

(iii) Provision of mobile schools for children of nomadic tribes, migrant labour and counteraction workers.

(iv) Sustained propaganda by all types of persons, preferably women officials, and non-officials, social and political workers, to bring every girl into school in class I, preferably at the age of six.

(v) Provision of incentives to prevent drop-outs, where the most effective incentive is the provision of mid-day meals. The other important incentives are free school uniforms, scholarships or stipends, and free supply of books and other study material. For schools which do not prescribe any uniform, some provision of clothing is necessary.

(vi) Special incentives for areas where enrolment of girls is low.

(vii) At least 50 per cent of teachers at this stage should be women.

(viii) Provision of at least two teachers in all schools as early as possible.

(ix) Developing a system of part-time education for girls who cannot attend school on a full-time basis.

(x) Adoption of the multiple entry system for girls who could not attend school earlier or had to leave before becoming functionally literate.

(xi) Provision of additional space in schools so that girls can bring their younger brothers and sisters to be looked after, either by the girls themselves in turn, or by some local women.

(xii) Opening of schools and greater flexibility in admission procedure in middle schools (multiple only) to help girls in completing their schooling.

**E. Sex education**

(i) Introduction of sex education from middle school.

(ii) Appointment of an expert group by the Ministry of Education to prepare graded teaching material on the subject.

(iii) This material may be used for both formal and non-formal education.

**F. Secondary education**

(i) Free education for all girls up to the end of the secondary stage.

(ii) Improving the quality of teaching and provision of facilities for important subjects like science, mathematics and commerce.

(iii) Introduction of job-oriented work experience, keeping in view the needs, the resources and the employment potential of region e.g., courses leading to training as ANM, typing and commercial practice, programmes oriented to industry and simple technology, agriculture and animal husbandry.

**G. Higher education**

(i) Development of more employment opportunities, particularly of a part-time nature, to enable women to participate more in productive activities.

(ii) Development of employment information and guidance service for women entering higher education.

**H. Non-formal education**

The greatest problem in women's education today is to provide some basic education to the overwhelming majority that has remained outside the reach of the formal system because of their age and social responsibilities as well as the literacy gap. For the sake of national plans for development, it is imperative to increase the social effectiveness of women in the 15–25 age group. Ad hoc approaches through the adult literacy, functional literacy and other programmes of the government have proved inadequate. As for vocational and occupational skills, the needs of women are greater than those of men. The skills differ according to the industrial and market potential of regions and it is imperative to relate the training to local needs, resources and employment possibilities instead of adopting an artificial sex-selective approach.

### 5.6.4 National Policy on Education (1986) on Women's Education

Concerned about the status and education of women in the country, the major recommendations were made by the National Policy on Education (1986) as under:

> 'Education will be used as an agent of basic change in the status of women. In order to neutralize the accumulated distortions of the past, there will be a well-positive, interventionist role in the empowerment of women. It will foster the development of new values through redesigning curricula, textbooks, the training and orientation of teachers, decision-makers and administrators and the active involvement of educational institution. This will be an act of faith and social engineering. Women's studies will be promoted as a part of various courses and educational institutions encouraged to take up active programmes to further women's development.
>
> The removal of women's illiteracy and obstacles inhibiting their access to, and retention, elementary education will receive overriding priority, through provision of special support services, setting of time targets, and effective monitoring. Major emphasis will be laid on women's participation in vocational, technical and professional education at different levels. The policy of non-discrimination will be pursued vigorously to eliminate sex-stereotyping in vocational and professional courses and to promote women's participation in non-traditional occupations, as well as in existing and emergent technologies.'

**Programme of Action (1992)**

A follow-up measure for implementing the provision of National Policy on Education, Programme of Action (1992) laid down the following time-bound targets, policy parameters and strategies:

(a) A phased time-bound programme of elementary education for girls, particularly up to the primary stage by 1990, and up to the elementary stage by 1995.

(b) A phased time-bound programme of adult education for women in the age group 15–35 (whose number is estimated to be 6.8 crore) by 1995.

(c) Increased women's access to vocational, technical, professional education, and to existing and emergent technologies.

(d) Review and reorganization of the educational activities to ensure that it makes a substantial contribution towards women's equality, and creation of appropriate cells/units thereof.

Policy parameters and strategies are to:

(i) Gear the entire education system to play a positive interventionist role in the empowerment of women.

(ii) Encourage educational institutions to take up active programmes to enhance women's status and further women's development in all sectors.

(iii) Widen women's access to vocational, technical and professional education at all levels, breaking gender stereotypes.

(iv) Create a dynamic management structure that will be able to respond to the challenge posed by this mandate.

### 5.6.5 National Policy on Education Review Committee (1990)

Considering women's education to be a vital component of the overall strategy of securing equity and social justice in education; National Policy on Education Review Committee (NPERC) states that:

> 'In order to promote participation of the girls and women in education at all levels, there is need for an integrated approach in designing and implementing the schemes that would address all the factors that inhibit their education. More implementation of disaggregated schemes such as opening of Non-formal Education Centres for girls, Adult Education Centres for women etc., by themselves are not adequate. In this context, special mention may be made of interaction of Early Childhood Case and Education (ECCE) with primary education. Education of women is not to be construed of a question of mere access, but of empowering them through education of all on equality of sexes.'

The Committee reviewed National Policy on Education (NPE) and Programme of Action (POA) in the context of women's education and made recommendations with regard to the following dimensions:

(i) Access to education and equality of learning
(ii) Content of education and gender bias
(iii) Vocational education
(iv) Training of teachers and other educational personnel
(v) Research and development of women's studies
(vi) Representation of women in the educational hierarchy
(vii) Employment of women
(viii) Adult education
(ix) Resources
(x) Management

NPERC strongly advocated intervention on behalf of women by the state governments and the local bodies in tune with what NPE envisaged in regard to women's education. The detailed recommendations with regard to the different dimensions are as follows:

(i) There is a crucial link between the easy access to water, fuel and fodder, and schooling of girls. This understanding needs to be explicitly reflected in the policy of government and be concertized in operational designs.

(ii) Priority needs to be given to the habitations/villages having enrolment and retention rates for girls in schools below the average rates of the states.

(iii) Planning for educational development of any given region would have to be necessarily conducted at the block or sub-block level. This task would be facilitated if it is undertaken through the proposed educational complexes.

(iv) Teachers, *anganwadi* workers, village-level functionaries of other departments and representatives of women's groups and community level organizations should play an important role in making micro-level information available to the educational complex for prioritization of action in this regard.

(v) The policy framework on women's education must bring out the criticality of the link between ECCE and girls' accessibility to elementary education.

(vi) The timings of ECCE centres should include the school hours so that the girls in the 6–14 age group are relieved from the responsibility of sibling care.

(vii) Priority should be given to habitations where enrolment and retention rates for girls are below the state average.

(viii) There should be shortening and staggering of school hours, particularly for girls.

(ix) There should be provision for uniforms, textbooks etc., to all girls and scholarships to deserving girls from underprivileged groups.

(x) Number of women teachers in co-educational schools should be increased.

(xi) Hostel facilities must be made available for girls at all levels.

(xii) The issue of regional disparities needs to be incorporated into the operational design for universalizing girl's access to elementary education.



(xiii) The curriculum in schools should include:

- Increase in the visibility of women and projection of a positive image of the role of women in history, their contribution to society in general and the Indian context in particular.
- Special efforts should be made to strengthen Mathematics and Science education among girls.
- Undifferentiated curriculum for boys and girls
- Elimination of negative stereotypes, and biological and social concepts which have a sexist bias
- Basic legal information including protective laws regarding women and children, and extracts from the Constitution to make the children aware of the fundamental rights and other basic concepts therein
- Specific measures to improve the participation of girls in physical training and sports should be undertaken.

(xiv) It is recommended that all school textbooks, both by NCERTs and SCERTs, and other publishers, be reviewed to eliminate the invisibility of women and gender stereotypes, and also for the proper incorporation of a women's perspective in the teaching of all subjects.

(xv) All media channels, in public and private sectors, should take serious note of the crucial role that the media can play in promoting gender equality and empowerment of women as enunciated in NPE.

(xvi) Media should project positive image of women.

(xvii) An awareness of the need for women's education, especially elementary and vocational education, should also be spread.

(xviii) Vocational training for women should be encouraged in non-traditional occupations, following an undifferentiated curriculum.

(xix) Vocational training programmes, in general, require a critical evaluation and re-orientation within which the incorporation of the women's perspective should be a key dimension. This would include sensitivity to women's issues and awareness of the problems in the education of girls.

(xx) Women's study centres should be organized in all the universities and recognized social science research institutions within the Eighth Plan.

(xxi) Develop 'Mahila Samakhya' in a decentralized and participative mode of management, with the decision-making powers developed to the district or block-level, and ultimately to the poor women's groups themselves.

(xxii) For imparting adult education to women, and thereby empower them, the Mahila Samakhya model should be tried out.

(xxiii) At the institutional level, the head of the institution should be made fully responsible for micro-level planning and ensuring universalization of girls' education and their access to high school or vocational education, according to disaggregated strategies and time-frames.



### CABE Committee on women's education

CABE Committee made the following observations the women's equality and education.

'.... The problem of women's education cuts across caste and regional barriers. Therefore, while women's participation in education should be closely monitored

and particular attention paid to remove the barriers impeding such participation, the earmarking of funds may not be administratively feasible. To sum up, we are of the view that while NPERC had rightly reiterated the importance of women's education, NPE policy frame is adequate and POA should be revised to take into account the recommendations of NPERC.'

### 5.6.6 Programme of Action (1992) and Women's Education

Programme of Action (1992) stated: 'Education for women's equality is a vital component of the overall strategy of securing equity and social justice in education. What comes out clearly from the implementation of NPE (1986) and its POA is the need for institutional mechanisms to ensure that gender sensitivity is effected in the implementation of all educational programmes across the board. It is being increasingly recognized that the problem of UEE is, in essence, the problem of the girl child. It is imperative that participation of girls is enhanced at all stages of education, particularly in streams like science, vocational, technical and commerce education where girls are grossly under-represented. The education system as a whole should be re-oriented to promote women's equality and education.'

The Committee recommended the following measures to make the education an effective tool for women's empowerment:

(i) Enhancing self-esteem and self-confidence of women.

(ii) Building of positive image of women by recognizing their contribution to the society, policy and the economy.

(iii) Developing ability to think critically.

(iv) Fostering decision-making and action through collective processes.

(v) Enabling women to make informed choice in areas like education, employment and health.

(vi) Ensuring equal participation in developmental processes.

(vii) Providing information, knowledge and skill for economic independence.

(viii) Enhancing access to legal literacy and information relating their rights and entitlements in society with a view to enhance their participation on an equal footing in all areas.

The following measures will be taken for achievement of the above parameters:

(i) Every educational institution will take up active programmes of women's development.

(ii) All teachers and instructors will be trained as agents of women's empowerment. Training programmes will be developed by NCERT, NIEPA, DAE, SRCs, DIETs, SCERTs and the university system.

(iii) Gender and poverty sensitization programmes will be developed for teacher educators and administrators.

(iv) In order to create a greater confidence and to motivate parents to send girls to school, preference will be given to recruitment of women teachers.

(v) The common core curriculum is a potentially powerful instrument to promote a positive image of women.

(vi) Funds would require to be earmarked in all education budgets for such awareness and advocacy-related activities.





(vii) Foundation course should be designed and introduced for undergraduates with a view to promote the objectives of empowerment of women. This will be done within the Eighth Plan period.

(viii) Efforts will be made to design special Non-formal Education (NFE) programmes for out of school and adolescent girls with a view to get them back into the formal stream or qualify for technical or vocational education in order to achieve Universal Elementary Education (UEE).

(ix) Special efforts would be made to recruit women teachers and to augment teacher-training facilities for women so that adequate numbers of qualified women teachers are available in different subjects, including Mathematics and Science.

(x) Programmes for continuing education should be designed to ensure that neo-literates and school-going girls have access to reading materials.

(xi) The electronic, print and traditional media will be used to create a climate for equal opportunities for women and girls.

(xii) Women's cells should be set up within all central and state agencies concerned with curriculum development, training and research.

(xiii) A monitoring cell will be set up within the Planning Bureau of the Department of Education, Ministry of Human Resources Development.

(xiv) All the Bureaus of the Department of Education will prepare a concrete action plan addressing gender related concerns in their specific area of work by August 1993. Relevant nodal institutions like UGC, AICTE, ICSSR, ICHR, CBSE, ICAR, ICMR, IAMR, State Boards, and Vocational Education Bureaus will also prepare similar action plans.

(xv) Special efforts should be made by the Centre and State planners, curriculum developers and administrators to consciously encourage participation of girls in non-traditional and emergent technologies at all levels. Guidance and counselling for girls should be undertaken as a necessary pre-condition to encourage participation for the improvement of girls' access to technical, vocational and professional education.

The greatest beneficiaries of New Education Policy should be the youth and the women. The New Policy will be used as an agent of basic change in the status of women. It has been stated in the New Education Policy that every effort will be made through the instrument of education, to evolve a society which values the equality of sexes, removal of sex bias against women in the textbooks and universalization of elementary education for girls. New incentives for girls' education such as free textbooks and attendance scholarships will have to be launched.

## 5.7 NEW EDUCATIONAL POLICY AND WOMEN'S EDUCATION

The National Policy on Education (NPE)—1986 revised in 1992 and renamed as New Education Policy—took a broader view in underscoring role of education in empowering women in order to overcome inequalities and disparities.

NPE, 1992 regarded as landmark in approach to women's education attempted for the first time to address the basic issues of women's equality.

**Check Your Progress**

9. Name the committee set up in 1963 by the National Council for Women's Education.
10. What was the aim of the New Education Policy, 1992?

Education will be used as an agent of basic in status of women. In order to neutralize the accumulated distortion of the past, there will be a well-conceived edge in favour of women. The National Education system will play a positive, interventionist role in the empowerment of women. It will foster the development of new values, through redesigned curricula, text books, training and orientation of teachers, decision makes and administrators.

The NPE also provided detailed information about the recommendations of the Sri Ramamurti Committee report and Education for all by 2000. This has presented an overview on the status of women's education in India since 1995 in all its aspects, particularly empowering women through Mahila Samakhya Programmes. These programmes are directed to create a learning environment where women can collectively affirm their aim, the strength to demand information and knowledge and move forward towards attaining a quality life (New Education Policy, 1986, 1992).

The eighth-year plan marked the adoption of two National Plans for Action in 1992—one for all children and the other one exclusively for the girl child.

During the ninth plan the thrust was on strengthening the early joyful period of play and learning in the young child's life to ensure a harmonious transition from the family environment to the primary school. Towards this, special efforts were made to develop linkages between ICDS (Integrated Child Development Scheme) and primary education. Their operational linkage aimed at reinforcing coordination of timings and location based on community appraisal a micro planning at grassroots level. Girl's education was viewed as a major intervention for breaking the vicious inter-generational cycle of gender and socio-economic disadvantages.

## 5.8 STATUS OF WOMEN'S EDUCATION

The Indian government is committed to education for all. However, India still has one of the lowest female literacy rates in Asia. There are dramatic differences in literacy rates by place of residence, with rates in rural areas lagging behind rates in urban areas. In 1991, the urban female literacy rate was more than twice that of the rural rate, 64 and 31 per cent, respectively (RGCC, 1993). While there have, however, been substantial increases in literacy rates in both urban and rural areas, the gap between the two sectors has not narrowed appreciably.

There are several reasons for the low levels of literacy in India, not the least of which is the high level of poverty. Over one-third of the population is estimated to be living below the poverty line (The World Bank). Although school attendance is free, the costs of books, uniforms, and transportation to school can be too much for poor families. Poor families are also more likely to keep girls at home to care for younger siblings or to work in family enterprises. If a family has to choose between educating a son or a daughter because of financial restrictions, typically the son will be chosen.

Negative parental attitudes toward educating daughters can also be a barrier to a girl's education. Many parents view educating sons as an investment because the sons will be responsible for caring for aging parents. On the other hand, parents may see the education of daughters a waste of money because daughters will eventually live with their husbands' families, and the parents will not benefit directly from their education. Also, daughters with higher levels of education will likely have higher dowry expenses as they will want an educated husband. However, education sometimes lowers the dowry for a girl because it is viewed as an asset by the husband's family.





### Status of enrollment

Although literacy rates in India are low, there has been a concerted effort to encourage girls to attend school, which should lead to higher literacy rates in the future. The India School Education Survey, conducted in 2002, aimed at assessing the availability of schooling facility for primary, upper-primary, secondary and higher secondary stages within the habitations (including SC/ST) in different population slabs. In case the facility is not available within the habitation, the distance at which it is available.

### Primary stage

According to present survey, at primary stage total enrolment is 12,29,15,301, which includes 5,75,52,738 girls and 6,53,62,563 boys. These figures show that 46.82 per cent are girls and 53.18 per cent boys. In rural areas, percentage of girl child enrolment is 46.73, whereas in urban area, the same is 47.10 per cent. In rural area, Delhi has the highest percentage of girl child enrolment (50.70 per cent) while it is the lowest 42.04 per cent in Bihar. In urban area, Sikkim with 51.98 per cent is on the top and Himachal Pradesh with 44.30 per cent is at the bottom. Overall, Meghalaya has maximum girl enrolment (50.48 per cent) and minimum is in Bihar (42.46). In comparison to Sixth Survey, total enrolment has increased by 26.68 per cent. At primary stage maximum enrolment (46.61 per cent) is in government schools and minimum (9.03 per cent) in private aided schools. Local body and private unaided schools have 29.40 per cent and 14.96 per cent of total enrolment respectively.

### Upper primary stage

There are 4,68,45,845 children enrolled at upper primary stage. In this enrolment 44.00 per cent are girls and 56.00 per cent boys. In rural area percentage of enrolled girls (42.63 per cent) is comparatively less than that in urban area (46.58 per cent). Meghalaya has the maximum percentage of girl enrolment (51.99 per cent) and Rajasthan the minimum (34.66 per cent).

In comparison to the Sixth Survey, 37.49 per cent growth has been observed in the enrolment with 52.70 per cent in case of girls. In rural area, the growth in girl enrolment is 66.55 per cent whereas in urban area it is 33.60 per cent.

### Secondary stage

There are 2,18,88,898 children enrolled at secondary stage. Out of these 41.51 per cent are girls and 58.49 per cent are boys. Percentages of enrolment in rural and urban areas are 57.59 and 42.41 per cent, respectively. In rural area, the percentage of enrolment for girls is 38.96 whereas in the urban area it is 44.98 per cent which shows a difference of 6.02 per cent. At secondary stage, Meghalaya has the highest percentage of girl enrolment (51.47 per cent) and Rajasthan has the lowest (29.33 per cent). In comparison to the Sixth Survey, the enrolment has increased by 43.82 per cent and girl child enrolment by 63.71 per cent. In the rural area, enrolment of girls has increased by 80.97 per cent while in the urban area it has increased by only 47.21 per cent.

## Higher secondary stage

At higher secondary stage 1,14,37,883 children are enrolled including 41.24 per cent girls and 58.76 per cent boys. The rural area has 39.60 per cent of total enrolment. In rural area the percentage of girl's enrolment is 38.31 whereas in the urban area this percentage is 43.17. Kerala has the highest percentage of girls enrolled which is 55.01 and Bihar has the lowest 26.39 per cent.

In comparison to the Sixth Survey, the enrolment at higher secondary stage has increased by 50.52 per cent. The increase in rural and urban areas are 75.16 per cent and 37.81 per cent, respectively. In rural area, enrolment of girls has increased by 122.37 per cent and in urban area, by 54.26 per cent.

## Improving literacy rates

There has been sharp improvement in the educational achievement of both males and females in India since the past several decades. In 1971, only 22 per cent of women and 46 per cent of men were literate (Register General and Census Commissioner (RGCC), 1977). By 1991, 39 per cent of women and 64 per cent of men were literate (RGCC, 1993). By 2005–2006, total literacy rate of the country was 68.3 per cent, in which 58 per cent of women and 78 per cent of men were literate (source sample survey). Thus, there has been a substantial rise in literacy figures of women in merely thirty-five years. Due to advancements in literacy, the gender disparity in literacy has gone down since 1981. According to Sample Survey 2005–2006 the gender gap in literacy rate was 20 per cent.

*Table 5.1 Literacy Rate in India*

| Year | Persons | Males | Females |
|---|---|---|---|
| 1901 | 5.3 | 9.8 | 0.7 |
| 1911 | 5.9 | 10.6 | 1.1 |
| 1921 | 7.2 | 12.2 | 1.8 |
| 1931 | 9.5 | 15.6 | 2.9 |
| 1941 | 16.1 | 24.9 | 7.3 |
| 1951 | 16.7 | 24.9 | 7.3 |
| 1961 | 24.0 | 34.4 | 13.0 |
| 1971 | 29.5 | 39.5 | 18.7 |
| 1981 | 36.2 | 46.9 | 24.8 |
| 1991 | 52.1 | 63.9 | 39.2 |
| 2001 | 65.38 | 76.0 | 54.0 |
| 2011 | 74.04 | 82.14 | 65.46 |

From this analysis one can infer that the female literacy rate (only half of the female population is literate) is still falling behind male literacy rate (three-fourth of the male population is literate). The rate of school dropouts is also found to be comparatively higher in the case of women. This higher rate of illiteracy of women is undoubtedly the reason for women's dependence on men and the fact that they are forced to play a subordinate role. The lack of education is the root cause for women's exploitation and negligence. Only literacy can help women to understand the Indian's constitutional and legislative provisions that are made to strengthen them. Thus, promoting education among women is of great important in empowering them to accomplish their goals at par with men in different spheres of life.



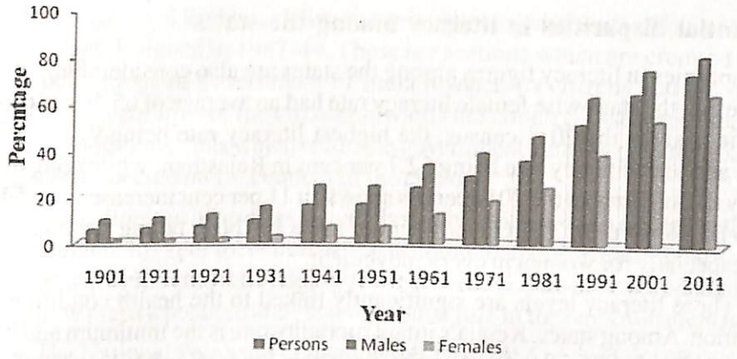



*Fig. 5.1 Literacy Rate in India*

*Table 5.2 State-Wise Percentage of Female Literacy in the Country as per 2011 Census*

| Sl. No. | Name of the State | Female Literacy |
|---|---|---|
| 1 | Andhra Pradesh | 59.7% |
| 2 | Arunachal Pradesh | 59.6% |
| 3 | Assam | 67.3% |
| 4 | Bihar | 53.3% |
| 5 | Chattisgarh | 60.6% |
| 6 | Delhi | 80.9% |
| 7 | Goa | 81.8% |
| 8 | Gujarat | 70.7% |
| 9 | Haryana | 66.8% |
| 10 | Himachal Pradesh | 76.6% |
| 11 | Jammu and Kashmir | 58.0% |
| 12 | Jharkhand | 56.2% |
| 13 | Karnataka | 68.1% |
| 14 | Kerala | 92.0% |
| 15 | Madhya Pradesh | 60.0% |
| 16 | Maharashtra | 75.5% |
| 17 | Manipur | 73.2% |
| 18 | Meghalaya | 73.8% |
| 19 | Mizoram | 89.4% |
| 20 | Nagaland | 76.7% |
| 21 | Orissa | 64.4% |
| 22 | Punjab | 71.3% |
| 23 | Rajasthan | 52.7% |
| 24 | Sikkim | 76.4% |
| 25 | Tamil Nadu | 73.9% |
| 26 | Tripura | 83.1% |
| 27 | Uttar Pradesh | 59.3% |
| 28 | Uttarakhand | 70.7% |
| 29 | West Bengal | 71.2% |
| **Union Territories** | | |
| 1 | Andaman & Nicobar Islands | 81.8% |
| 2 | Chandigarh | 81.4% |
| 3 | Dadra & Nagar Haveli | 65.9% |
| 4 | Daman & Diu | 79.6% |
| 5 | Lakshadweep | 88.2% |
| 6 | Pondicherry | 81.2% |
| **All India** | | **65.46%** |

### Substantial disparities in literacy among the states

The disparities in literacy figures among the states are also considerable. According to Table 5.2, the state-wise female literacy rate had an average of 65.46 per cent on an all-India basis in the 2011 census, the highest literacy rate being 92.0 per cent in Kerala and least literacy rate being 52.7 per cent in Rajasthan; while comparing the literacy rate of females the 2011 census shows an 11 per cent increase from 54.16 per cent to 65.46 per cent. The Government of India has been taking various steps and plans especially for women in every movement.

These literacy levels are significantly linked to the health conditions of the population. Among states, Kerala's infant mortality rate is the minimum and it has the maximum life expectancy. On the contrary, Uttar Pradesh and Bihar fall among the states with the lowest life expectancies in India (India Registrar General (IRG), 1996; IRG, 1995).

Considering India as a whole, a large number of states have extreme rural–urban gaps in female literacy. Six out of the twenty-nine states, have 25 per cent or less women in village areas, who are literate. In Rajasthan, the literacy per centage of women is below twelve in the rural areas.

## 5.9 SUMMARY

In this unit, you have learnt that:

- The Indian ancient scriptures are eternally relevant and useful for positive conduct of human life and all its aspects. They inspire us to lead better, more fruitful lives. The main characteristic of the Indian education system is that it has its roots in traditional teaching and learning process enshrined in these ancient scriptures.
- Teacher occupied a pivotal position in the Vedic System of education. The teacher was a parent surrogate (parent substitute), a facilitator of learning, exemplar and inspirer, confident, detector friend and philosopher moral educator, reformer, evaluator, character and personality builder, importer if knowledge and wisdom and above all a guru, religious and spiritual guide.
- There is a long hymn in the 'Atharva Veda' describing the ceremony pertaining to studentship. The initiation ceremony was called Upanayana which lasted three days. It laid down the foundation of a planned life. The pupil owed his first birth (physical) to his parents and the second birth (spiritual) to his teacher. The rite of Upanayana was meant to purify body and mind and to make one fit for receiving education.
- India has a great history of socio-religious reforms. Various factors led to socio-religious reforms in Indian society. The contemporary Indian social system was associated with religion. Naturally social reforms and religious reforms were complementary to each other. A lot of socio-religious reform movements took place in the nineteenth century.
- In Colonial India, the social status of women was dependent on the men. The religion, traditions and customs all were credited with how a woman should behave to men in all matter. Women were kept aloof from all the opportunity of education. Except a few women of aristocrat families, the life of common women was not worth living. The social justice and equality was not for them. Due to lack of education there was ignorance of even basic rights.

**Check Your Progress**

11. Name the states with maximum and minimum girl enrolment in the primary stage?
12. **State whether True or False**
    (i) Rajasthan has the highest literacy rate according to 2011 Census.
    (ii) Literacy levels are linked to the wealth conditions of the population.



- Fundamental Rights and directive principles are vital units of Indian constitution; it was designed in 1947-49. These are sections which are credited with major obligations of government of India towards its citizens and the fundaments responsibilities of the citizens towards the country. Also, these sections have constitutional bills which credit the government with the right for policy making and expected moral conduct of the citizens.
- Education can be used as the catalyst in bringing around change in the status of women. In order to neutralize the accumulated distortions of the past, there is now a well-conceived edge in favor of women. The national education system now plays a positive and interventionist role in the empowerment of women.
- The National Policy on Education (NPE)—1986 revised in 1992 and renamed as New Education Policy—took a broader view in underscoring role of education in empowering women in order to overcome inequalities and disparities.
- NPE, 1992 regarded as landmark in approach to women's education attempted for the first time to address the basic issues of women's equality.

## 5.10 KEY TERMS

- **Socio-religious reforms:** It can be defined as deliberate attempt to change or to modify processes, patterns, interactions or organizations of society or religion or both in order to bring about well-being.
- **Educationally backward classes:** Sections of society who have not got the opportunity to get proper education.
- **Writ:** *It* is a formal written order issued by a government entity in the name of the sovereign power.
- **Non-formal education:** According to the United Nations, non-formal education may cover educational programmes to impart adult literacy, basic education for out-of-school children, life skills, work skills and general knowledge.

## 5.11 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Ancient Indian scriptures and writings of pedagogical approaches are collectively known as Vedic literature.
2. Teachers were a highly honoured class—even by kings. There was customary tradition for kings to rise from their throne in order pay regard to great teachers such as Narada, Vashishtha and Vishwamitra.
3. The Vedas give a very honourable and respectable status to women. They were eligible for higher education for the study of the Vedas and the performance of administrative and other important jobs mostly performed by men even today.
4. The students were given three grades as under:
   (a) *Maha prazanan grade:* Students of very high ability
   (b) *Madhyama prazanan grade:* Students of high ability
   (c) *Alpa prazanan grade:* Students of low ability
5. Socio-religious reforms can be defined as deliberate attempt to change or to modify processes, patterns, interactions or organisations of society or religion or both in order to bring about well-being.

6. The first and foremost effort for the betterment and upliftment of Indian women was made by Christian missionaries when British Empire was spreading it roots in India. Although the usual perception regarding special efforts was that it meant conversion to Christianity, in reality, with the help of government, many schools, dispensaries and orphanages were opened to help needy people.
7. The Right against Exploitation is explained in Articles 23–24; it lays down assured provisions to weaker sections of the society against exploitation by individuals or the State. Article 23 bans human trafficking, declaring it as a crime punishable by law, and also prohibits forced labour or any act of compelling a person to work without wages. Also, it permits the State to impose compulsory service for public purposes, including call-out for defence services in war state.
8. The directive principles of state policy are the background guidelines for the enclosing laws by the government. These principles are states in Part IV of the Constitution.
9. In May 1963, the National Council for Women's Education set up the Committee for Girls' Education and Public Cooperation for looking into the causes for lack of public support, particularly in rural areas, for girls' education and to enlist public cooperation.
10. The New Education Policy took a broader view in underscoring role of education in empowering women in order to overcome inequalities and disparities.
11. Meghalaya has the maximum girl enrolment (50.48 per cent) and minimum is in Bihar (42.46).
12. (i) False (ii) False

## 5.12 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. List the features of the Vedic Indian education system.
2. Write on the autonomy of education systems in Vedic times.
3. What was the attitude of the colonial rulers towards women's education?
4. State some of the Fundamental Rights in the Indian Constitution that support women's education.
5. List the major recommendations of the Committee on Women's Education (1957–59).
6. Briefly talk about the role of the New Education policy of 1992.

### Long-Answer Questions

1. Explain the role of teachers in the Vedic Indian education system.
2. Describe the socio-cultural reforms that took place in India in the 19th century. Also give names of the major reformers and the work they did.
3. What measures have the Constitution taken to ensure women's education in India?
4. Asses the measures taken by any two committees set up for equal opportunity to women in education.
5. Explain the status of women's education in contemporary times.





## 5.13 FURTHER READING

Bhatt, B.D. and Sharma, S.R.; *Women's Education and Social Development*, Kanishka Publishing House, New Delhi, 1992.

Rao, U.; *Women in Developing Society*, Astigha Publishing House, New Delhi, 1985.

Singh, U.K. and Nayak, A.K.; *Women's Education*, Commonwealth Publishing, New York, 1997.

**Reference**

http://www.ncert.nic.in/programmes/education_survey/pdfs/Enrolment_in_school.pdf

# UNIT 6 EDUCATION AND EMPOWERMENT

NOTES

**Structure**


6.0 Introduction
6.1 Unit Objectives
6.2 Emancipation of Woman and Role of Education
  6.2.1 Minimum Level of Learning (MLL)
  6.2.2 Scientific Literacy
  6.2.3 Computer Literacy
  6.2.4 Employment Opportunities and Problems of Working Women
6.3 Role of NGOs, NHRC and NCW in the Emancipation of Women
  6.3.1 Role of NGOs
  6.3.2 Role of NHRC
  6.3.3 Role of NCW
6.4 Government Efforts in Promoting Women's Education
  6.4.1 Statistics, Acts and Other Declarations
  6.4.2 Teacher Preparation in Gender Sensitivity
6.5 Summary
6.6 Key Terms
6.7 Answers to 'Check Your Progress'
6.8 Questions and Exercises
6.9 Further Reading


## 6.0 INTRODUCTION

As women's education has become one of the key development objectives, it is crucial to examine the assumptions under which policies, programmes and projects are formulated towards this goal. More recently, the concept of empowerment has been tied to the range of activities undertaken by and for women in different areas, education included. In all these, a related question is: From what and whose perspective are we going to evaluate such assumptions and its empowering outcomes?

The underlying assumption for formulating the policies and programmes are that if women understood their conditions, knew their rights and learned skills traditionally denied to them, empowerment would follow. Moreover, empowerment has become a widely used word. Empowerment in its emancipatory meaning, is a serious word — one which brings up the question for personal agency rather than reliance on intermediaries, one that links action to needs, and one that results in making significant change. It is also a concept that does not merely concern personal identity but brings out a broader analysis of human rights and social injustice.

This unit will closely look at the measures taken by the Indian government for emancipation of women and the role of education. It will also assess the functioning of non-governmental organizations and bodies like the NHRC and NCW in empowering and educating women.

NOTES

## 6.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the concept of emancipation of woman, including aspects like computer literacy, scientific literacy, minimum level of learning and employment opportunities and problems of working women.
- Discuss the role of NGOs, NHRC and NCW in empowerment of women.
- Describe different government efforts in promoting women's education, especially gender sensitivity.

## 6.2 EMANCIPATION OF WOMAN AND ROLE OF EDUCATION

In today's globalized world, the goal of woman emancipation faces multiple, different obstacles. Many social reformers, NGO's and other organizations are working to fulfil the long desired dream of women to achieve better opportunities in society in order to ensure their value and integrity. However the idea of women's emancipation is ill-perceived by many in today's date too. In its broadest sense emancipation is rather a process not end product. It is the process of assimilating knowledge and awareness of self, which enable women to move forward in life with greater self-worth and self-assurance. In a nutshell, an empowered woman is an asset and reason for pride to a nation.

'Education is one of the most important means of empowering women with the knowledge, skills and self-confidence necessary to participate fully in the development process.'

*—ICPD Programme of Action, paragraph 4.2*

Education is essential for a worthwhile human life and women and girls are not exceptions to the implication of this fact. Education of women is not important only because it is an entry point to a profession, but also because effect of educating a woman extends throughout her family and society at large. Investing more thought and resources in girls' education can prove to be a weapon to eliminate the vicious circle of poverty from its roots. Only an educated woman can appreciate the significance of a healthy lifestyle and can seek it for herself and her family. Moreover, education makes girls and women aware of their rights and confident enough to claim them.

With every passing five-year plan, there is a rapid increase in education of girls and women in rural and urban areas. Although there is a tendency to give boys the first opportunity to go to school and the girl of the house follows later, reason being that the notion of man being the chief earner of a family is still deep-rooted in Indian middle class families whereas in poor families, women have equal or more share in total earning of family. But with increasing awareness middle class families have also acknowledged the utter importance of women's education.

The thump of increased consciousness about women education is still to be felt as the incubation period of attitude shift is still very long. There is still a tremendous drop-out in secondary level of girl's education. But there is also a developing trend to educate girls to get educated grooms, but with a long-term need for their developing into empowered human beings. The Indian society is convinced about the empowering role of education, training and skill development for women at the individual level, and there





NOTES

is enormous expansion in the infrastructure for education in the public and the private sector, particularly in the urban areas.

### 6.2.1 Minimum Level of Learning (MLL)

Basic education, particularly universalization of free and compulsory education up to the age of fourteen, is accorded high priority in most five-year plans. The main effort was towards bridging the gaps that existed in making education accessible among boys and girls and between different sections of the population and in bettering the retention and accomplishments of children of the age-groups concerned. A key goal was to supply alternative methods for education to learners of underprivileged segments and working children who, due to obvious reasons, could not enroll or complete the entire year in ordinary schools. The minimization of percentage of drop-outs, which have remained alarmingly high, especially among girls and children of the Scheduled Castes, Scheduled Tribes and other financially and socially destitute sections, was a key aim of the basic education policy. The mid-day meal programme was launched in August, 1995 to support access, retention and dietary care of primary school students. Achieving better quality in terms of schooling and accomplishment levels of school-going children was an aim the government tried to fulfill with the medium of the programme known as minimum levels of learning (MLL) and better infrastructural facilities. Many innovative programmes were executed to enhance school management, and maximum focus was laid on involving the community members and other voluntary organizations.

### 6.2.2 Scientific Literacy

If one tries to think about strengthening a democracy, it seems that the first step would be to completely eliminate corruption and corrupt leaders. However, the next and most important step would be to spread literacy, and especially scientific literacy. In a society that is increasingly run on technology, a high rate of scientific literacy is imperative for the growth of the economy, particularly for a large country like India, where a high percentage of the population is stuck in remote and poor areas.

An important question comes to mind here: What is scientific literacy? To put simply, it means that a person should be able to ask questions, or determine answers to questions, derived from everyday experiences. The person should have the ability to seek explanations to natural phenomena rather than merely accepting prevailing judgments or accepting them as some sort of miracles. Additionally, scientific literacy includes being able to identify with write-ups related to science in the popular press, be aware of scientific concerns of national importance and arrive at conclusions based on proper research and evidence. The individual must be capable of taking educated decisions and take stands that have been determined on the basis of scientific and technological knowledge.

In India, there are no figures or data that reflect the current state of scientific literacy. In reality, no such study has ever been undertaken across the nation which would be able to assess the level of scientific literacy among the country's population. However, on the other hand, a country like China, which we are always comparing ourselves with, has had surveys for evaluating scientific literacy for the past two decades and also carrying out comparisons with other countries.

Recently, a national survey on scientific literacy was conducted by the China Association for Science and Technology (CAST). The survey showed that only 3.27 per cent of the candidates had basic scientific knowledge, in 2010, which is equivalent to the

level registered in developed countries and regions in the early 1990s. In a nutshell, just three per cent of adults in China meet the level of scientific literacy required to understand common, basic scientific terms, concepts and methods, and the impact of science on daily life. These results indicate that scientific literacy is alarmingly low and there are no signs of growth any time soon. These dismal numbers have forced the Chinese government on placing special focus on improving scientific literacy in its 12th Five-Year Plan (2011-2015).

India is equally dismally placed as China and should take strong steps to evaluate scientific literacy amongst its citizens. To this end, regular surveys must be held if India takes its ambitions of becoming a superpower seriously. The surveys will show up scientific issues and concerns that are found to be confusing the population and will also help locate population segments that are most glaringly in need of understanding scientific concepts.

### 6.2.3 Computer Literacy

We hear very often that technology has become the thrust of the modern world. Innumerable write-ups and articles have been written about how mankind has succeeded in inventing things that have changed all dimensions of life itself on the planet and has far-reaching effects on its future.

In this section we will discuss the far-reaching impact of the computer, a key invention of our lifetime, in fact, one so major that it has changed the way a human being lives, sees and perceives things. Computers are not only the greatest invention of the twentieth century but also considered by some to be the greatest since the Industrial Revolution.

Computer has been an invention that made human growth more rapid than ever imagined and put him way up above all other kind of life forms that we know of. Even though computer experts still consider the human brain to be the fastest supercomputer in the world, the technology is developing at such a fast pace that within a few decades, the computer is expected to be able to replicate the human mind in every way.

Knowing what we do now of computer's capabilities, it is evident that computer literacy is vital if a country wants to prosper, in terms of its organizations, economy or even as a whole.

#### Means, needs and methods

The skill and knowledge to use computers and associated technology effectively, ranging from basic to sophisticated skills, is counted as computer literacy. However, there is no clear definition of computer literacy and it can vary from individual to individual; since there are experts who do not consider a person who is largely only using a computer for data-entry jobs using applications like MS Word or Notepad, an actual computer literate.

Another way to gauge the computer literacy of a person is by their ability to find their way new programs, and understanding their operation without wasting too much time in formal training. However, there is a definite level of computer literacy that an individual must reach in order to be considered superior to a person who is 'illiterate' with computers. This level is based on the society, economy and one's position in the social ladder.



It is not possible for every country to be at the same level of technology penetration and standard of living; so, the requirement for computer literacy also varies. Since developed countries have a high dependence on computers usually for most professional work, computer literacy is considered a basic requirement for employment. Simple activities like writing, reading, and so on also carried out on computing devices.

For these countries, computer literacy has reached the next level of multimedia literacy because for them, computers are commonplace and it is not enough to just be familiar with the basic functionality of a computer.

#### India: Disrupting the Digital World

While India still lags behind the developed countries on many counts, it has progressed by leaps and bounds in the area of adoption of the digital technology. It is almost impossible now to imagine an office, a city or a large organization, such as Indian Railways functioning without the computer, so impressive has been India's pace of coming level with most developed countries in this field, despite being a third-world country in terms of sanitation, education, infant mortality rate and so on.

India's talent and sophistication has been recognized even by major firms such as Google and many others in the Silicon Valley because a number of top executives working in such firms are of Indian origin. It is a matter of undeniable prestige that India is part of exclusive and advanced groups like the G8, which is monopolized by the first-world countries. A large part of credit for this high level of computer knowledge can be attributed to the advanced learning methodologies used in top educational institutes like IITs and NITs.

#### Steps to be taken

Computer-based technology is growing at such fast speeds that it's not unbelievable that even computer literate people may find it difficult to keep up with the advancements made. So, it is important that our government makes sure all the individuals of the youngest generation are provided their entitled computer literacy. The current economic scenario and latest trends indicate the significance of this need.

Government can ensure computer literacy through provision of funds and opening training centers with adequate facilities. In these times, when even simple daily chores like grocery shopping can be done online, being computer illiterate is no less than a sin.

Besides grocery shopping, other things that can be done online are booking tickets, paying bills, transferring money, recharging mobile phones, searching information, checking availability of flats and other accommodation, even giving exams and so on. It seems that the boundaries between countries and cultures are diminishing fast and the power of the Internet should be leveraged in the best way possible. The absence of computer literacy will mean that India could lose its edge over competing markets.

### 6.2.4 Employment Opportunities and Problems of Working Women

While women are very much a part of the Indian economy, they have to face big challenges to be able to do so, just as they have to face injustices in society and their daily lives. The number of women who are a part of the labour force with regard to the total female population indicates how difficult it is for them. For example, in 2008, only 33 per cent women were part of the labour force, as compared to the 81 per cent

NOTES

for men. If we compare these figures with those of China, we find that 68 per cent of the females in China are engaged in labour of some kind. Within India, the lowest participation rate of women is seen in Delhi, a state also otherwise known to be particularly harsh to its women.

When the labour force statistics are gathered, they consider not only the employed but also unemployed persons who are looking for jobs. In this regard, in India, a large number of women not considered part of the labour force are found to be 'attending to domestic duties' in their homes. National Sample Survey reports show that, in 2009-10, out of every 1,000 females (all ages) in India's rural areas, 347 were attending to household work. In the case of women living in cities, surprisingly, this number was higher still: 465 out of every 1000. If one compares these to the numbers of village-based and city-based men who were engaged in household tasks: only five per 1,000 and four per 1,000 respectively.

One would wonder why India's female labour participation rate is so low. One of the factors is the methods used to assess the degree of women's work. For example, the work a woman does in her home is not counted as a contribution to the economy and so does not get counted as 'labour', and in turn, is not considered in national income statistics. However, if a woman does the domestic chores in someone else's home, as paid help, it is counted as an economic activity and is considered in the national income. As we all know, women carry the weight of the entire household on their shoulders and perform multifarious activities on a daily basis—childbirth, caring for the children and seniors, cooking, and other tasks that are indispensable for the running of a family. It is no secret that society does not value these contributions enough and this disregard also shows up in the national statistics where women are not given their due.

In villages, it has been observed that women do agricultural work in times of agrarian distress. In these times, they take any odd jobs that they can get to add to their family incomes that are proving to be inadequate. One such long period was prominently seen between the years 1999-2000 and 2004-05. In these five years, agricultural incomes in the country were stagnant and showed minimal or no growth, but surprisingly, the number of self-employed women labourers engaged in agriculture activities increased by 17 million, most likely a sign of 'distress employment'.

Going forward, between 2004-05 and 2009-10, the number of self-employed female workers engaged in agricultural activities reduced by 19 million in India.

This reduced number indicates that during that period there was a modest increase in the growth of agricultural incomes and a result of the positive impact on rural employment and wages created by the MGNREGA (Mahatma Gandhi National Rural Employment Guarantee Act). Therefore, one can safely conclude that in India, during the 2000s, women's engagement in agriculture was not due to any actual opportunities for generating extra income, but a clutching-at-the straws type of effort to avoid complete impoverishment.

### Urban, educated women

Society and its norms have been mainly responsible for the low labour participation of Indian women. In most families, husbands and in-laws do not allow women to take up proper professions and it is even worse in many parts of the country where women are not allowed even to step out of the house alone or are allowed to go only a limited, prescribed distance for buying groceries for the household and such.





NOTES

In this regard, it is noteworthy that labour participation is remarkably poor in India among urban, educated women, who should be most capable of resisting conservative social norms. In 2009-10, the percentage of those taking care of household tasks (and so, not part of the 'earning' labour force) was 57 per cent among urban females with graduate degrees or higher, in comparison to the mere 31 per cent among females living in rural areas who had been educated upto primary or middle school.

If one starts to find reasons for such low employment rates, and withdrawal of women from employment, it seems that lower remuneration than men could be one reason. However, wage disparities also exist in South and Japan but the female labour participation is high nevertheless in both countries.

Another major, and possibly the key factor for pathetically low employment rates of women is the lack of adequate employment opportunities. The sluggish creation of employment opportunities can, in turn, be associated with a particular aspect of India's economic shift. It is the comparatively meager contribution of the manufacturing sector towards India's GDP (gross domestic product) and employment.

Within the field of manufacturing in India, women's jobs are largely in the low-paid, danger-prone sectors. Between the years1999-2000 and 2004-05, women were responsible for 3.7 million of the 9.7 million new manufacturing opportunities generated in the country. A major percentage of these women were engaged in the export-oriented businesses like garment-manufacture. However, in 2009-10, India's manufacturing sector was beset by a variety of issues, such as power shortage and poor demand from western countries. Between 2004-05 and 2009-10, 3.7 million people lost their manufacturing jobs, and over 80 per cent of those who were affected were women.

Just after the turn of the century, services sector has come up as the chief source of employment for women, largely in low-paid jobs such as that of domestic help. Simultaneously, females accounted for only a meager portion of the comparatively high quality jobs in India in last few years: for example, only 20 per cent of the new jobs in financing, real estate and business services during the 2000s, and 10 per cent of the new jobs created in computer related opportunities in years after 2005.

Amartya Sen has included the 'missing women' in India in his writings, stressing the low female-male ratio in the country's population. Sen claims that this factor indicates the brutal disadvantages imposed on the girl child in India. The fact that women are missing from India's population is reflected in the number of missing women in India's labour force. It is visible in the form of the surprisingly large number of women who have pulled away from professional duties and turned their attentions to domestic duties.

In 2009-10, the number of women taking care of household duties in India was 216 million, which is more than the total population of Brazil. Out of these, women who hold graduate degrees or more were counted to be 12.7 million, and this was more than two times the entire population of Singapore. It is obvious from these statistics that the large-scale withdrawal of women from job opportunities translates into massive loss of talent and huge opportunity cost to the nation.

The problem can be approached by generating more jobs and providing better working conditions for women. This is likely to encourage female participation in the economy. As more women become part of the workforce, the protest against gender-based discrimination will become stronger. Another aspect of this is that India will have more hands and brains to take its economy upwards.

**Check Your Progress**

1. What is emancipation, in the context of women?
2. What is scientific literacy?
3. Give one reason for low labour participation of women in India.

NOTES

## 6.3 ROLE OF NGOs, NHRC AND NCW IN THE EMANCIPATION OF WOMEN

Independent NGOs, National Human Rights Commission (NHRC) and National Council for Women (NCW) have worked on many successful initiatives together as well as separately for the emancipation of Indian women, especially in rural and remote areas, where even basic necessities like water, sanitation and basic medical aid were not easily available. In this section, we will learn briefly about the roles these three entities have played.

### 6.3.1 Role of NGOs

Besides the institutional and administrative framework set up by the government to extend and protect human rights, India has a strong tradition of non-governmental and voluntary action. An estimated 25,000 non-governmental organizations (NGOs) operate in Indian Article. India also has a strong tradition of community-based people's organizations.

Some NGOs work on a single issue while a number of NGOs work on a variety of issues. They use a number of strategies to protect and promote human rights which include, among others, the following:

- Research, investigation and documentation
- Advocacy (legislative advocacy and media advocacy)
- Monitoring
- Fund-raising
- Creation of awareness
- Law and policy reform
- Use of legal means like PILs in courts etc.

Some important human rights NGOs include People's Union for Civil Liberties, People's Union for Democratic Rights, Human Rights Law Network, South Asia Human Rights Documentation Centre, Asian Centre for Human Rights, Amnesty International, Human Rights Watch, International Rehabilitation Council for Torture Victims (IRCT), Association for Prevention of Torture (APT), Minorities Rights Group International etc.

### 6.3.2 Role of NHRC

In February 2001 the country undertook and completed the Census of India 2001, the last such census having been conducted in 1991. The Provisional Population Results, released on 26 March 2001, are of immense interest, not least to those concerned with the state of human rights in the country. Census 2001 confirms the persistence of patterns of discrimination against women and the girl child, both within the family and beyond, limiting their access to education, nutrition, health care and other essential rights.

The Annual Report of the NHRC for the year 1999-2000 had dwelt at some length on the unyielding character of such discrimination, despite the vision of the Constitution which, under Article 14, expressly proclaimed equality before the law and, under Article 15, unequivocally prohibited discrimination on grounds of religion, race, caste, sex or place of birth.





NOTES

Based on a careful analysis of available data on female to male sex ratios, maternal mortality rates, life expectancy at birth, and crimes against women, the Commission had concluded in its preceding Report that 'discrimination against women and girls is still a pervasive phenomenon, even though the Constitution set itself against discrimination based on sex and enjoined the State to act against such discrimination.' The Commission also observed that a further dimension was added to the multiple discrimination faced by women and girls when discrimination based on caste was added to the other acts that were violative of their rights. The Commission, therefore, proceeded to make a number of recommendations to deal with the situation, starting once again with its repeated plea that free and compulsory education be provided as a Fundamental Right to all children until they complete the age of fourteen years, that greater efforts be made to combat discrimination against the girl child in all of its manifestations and that, in particular, the doors be thrown open for them to have better access to education, nutrition and health care.

Education is considered as means of development of personality and awareness. Education is one of the most important human rights but the position of women's education in India is not at all satisfactory. Despite the improvement in the literacy rate after Independence, there continues to be large gap between the literacy levels of men and women. Almost half the women population is even unable to recognize language characters. At least 60 million girls lack access to primary education in India. Due to large percentage of uneducated women in India, they are not even aware of their basic human rights and can never fight for them.

You learnt about the composition and working and the origin of NHRC in detail in Unit 3. NHRC has contributed to the uplift and empowerment of women in multiple ways. Some of the areas that NHRC initiatives cover are:

- Education
- Prevention of trafficking of women and children
- Housing opportunities
- Increased monetary benefits to divorced women
- Right to healthy pregnancy and childbirth
- Provision of subsidized food
- Equal employment opportunities for women
- Financial and other help to widows of men killed in riots and terrorist attacks
- Effective and speedy justice to rape victims

### 6.3.3 Role of NCW

The status and prestige of women in society is the mark of civilized society, the better the women's position is, advanced the society is. In the Indian scenario, from ancient times to today's modern time, women played very empowered and higher roles in society, from being women sages and scholars in the Vedic period to being employed in the armed forces, IT sector, politics, industry and other significant areas while balancing their role as a daughter, wife and mother. This journey towards modern status of women has not been bed of roses. Women fought against the orthodox male-conquered society to restrain her stronger and independent entities. While all these are positive elaborations, cases of rape, harassment at workplace and dowry deaths are rampant. Ignorance about their rights is still widespread among a majority of the women. It was in this

NOTES

ideology that the Committee on the Status of Women in India (CSWI) recommended nearly two decades ago, the setting up of a National Commission for Women to fulfil the supervision functions to facilitate rectify of injustices and to promote the socio-economic development of women.

In January 1992, the National Commission for Women (NCW), was established as a statutory body under the National Commission for Women Act, 1990 (Act No. 20 of 1990 of Government of India) to review the constitutional and legal safeguards for women; recommend remedial legislative measures, facilitate rectification of grievances and advise the Government on all policy matters affecting women.

As the problem of violence against women is multi-layered, the NCW has adopted a multi-pronged strategy to tackle the problem. The Commission has initiated class of legal awareness among women, thus preparing them with the knowledge of their legal rights and with a capacity to use these rights. It assists women in rectify of their injustices through pre-litigation services. To facilitate speedy delivery of justice to women Parivarik Mahila Lok Adalats are organized in different parts of the country to review the existing provisions of the Constitution and other laws affecting women and recommending amendments thereto, any lacunae, inadequacies or shortcomings in such legislations. It organises promotional activities to mobilise women and get information about their status and recommend paradigm shift in the empowerment of women. The Complaints and Counselling Cell of the commission processes the complaints received oral, written under Section 20 of the NCW Act. The complaints received relate to domestic violence, harassment, dowry, torture, desertion, bigamy, rape and refusal to register FIR, cruelty by husband, deprivation, gender discrimination and sexual harassment at work place.

NCW tackles the problems by ensuring that investigations by the police are advanced and monitored. Family disputes are resolved or compromised through counselling.

As per the 1997 Supreme Court Judgement on sexual harassment at workplace every employer is required to provide for effective complaints procedures and remedies including awarding of compensation to women victims. In sexual harassment and provocation complaints, the concerned organizations are urged to rush cases. For serious crimes, the Commission constitutes an Inquiry Committee which makes spot enquiries, examines various witnesses, collects evidence and submits the report with recommendations. The execution of the report is supervised by the NCW.

The complaints received by the NCW show the trend of crimes against women and suggest systemic changes needed for reducing them. The complaints are analysed to understand the slits in the mundane performance of government in confronting crimes against women and to propose amendment measures. The complaints are also used as case studies for sensitization programmes for the police, judiciary, prosecutors, forensic scientists, defence lawyers and other administrative functionaries.

The Commission also conducts seminars, workshops and conferences and sponsors such events by providing financial assistance to research organisations and NGOs. The important areas so far covered include women in detention, violence against women; sexual harassment at work place; educational, health and employment aspects; women in agriculture and Panchayati raj sector; custodial justice and mental health institutions.

The NCW holds public hearings on issues affecting large sections of women such as crime against women, women in unorganised labour sector, women in agriculture and women of minority groups. The deposition at these enquiries helps in appreciating





NOTES

the problems and initiating remedial action. As a measure of arousing public awareness and breaking bureaucratic apathy, public hearings under vigilant activists like Justice V.R. Krishna Iyer and Swami Agnivesh were held to understand problems and expedite solutions in the case of Kol women of Bundelhekhand; deserted women of hill districts in U.P., rape case of girl children of Tamil Nadu, unorganised women labour and minority communities of Tamil Nadu; creche workers' enquiry and tribal women of Dindigul, Tamil Nadu.

Special studies on social mobilisation, maintenance and divorced women, Panchayat raj in action, women labour under contract, gender bias in judicial decisions, family courts, gender-component in various Commissions' reports on women, violence against women, women's access to health and education in slums to help in formulation of NCW's policies for recommendations are led by the NCW. These special studies emphasises on development of health facilities, socio-economic development among women belonging to weaker strata of society; Special needs of mentally disabled women and financial needs of women via the Gramin Banks and the widows of Vrindavan.

The NCW also comprises teams of professionals to deal with special issues which are taken up by them from time to time. Some important issues taken up by the NCW include sexual harassment at workplace, women in confinement, anti-arrack movement, issues concerning prostitution and political and technological empowerment of women in agriculture.

In order to educate itself, to enhance its own knowledge and awareness about worldwide movements, laws and research, the NCW established its own library in 1994. It has now grown into a resource centre for research scholars/ activists with a collection of nearly 2300 books covering different issues relating to women's advancement. Besides, the library collection includes important reference books, like encyclopaedias, directories of NGO's as well as the complete set of Halsbury's Laws of England.

The NCW have its own publications and also sponsor research studies on various facets regarding women issues and publish them in research journals and other print media. The Commission commences evaluation of the progress of development of women in various states. Tamil Nadu, Andhra Pradesh, Rajasthan, Uttar Pradesh, Orissa, Sikkim, Madhya Pradesh, Assam, Tripura and Manipur have been covered so far. The Commission intermingles and networks with different NGOs and the State Commissions for safeguarding gender equality and empowerment of women. The Commission also interacts with the media, social activists and academics to spread awareness and consciousness among masses.

## 6.4 GOVERNMENT EFFORTS IN PROMOTING WOMEN'S EDUCATION

Government intervention in empowerment of women is not an old concept. The East India Company established its rule over India since 1757, which is called the modern period. During this period education of men was modernized and institutions were opened to promote this but nothing was done to promote women education. In 1858, the British government took upon itself the direct responsibility of the administration. But in spite of this, they did not pay any attention towards the education of women of this country. In 1904, Annie Besant established Central Hindu Girls School at Benaras and Prof. Karue established SNDT Women's University at Poona for the promotion of women education.

**Check Your Progress**

4. Name any two well-known human rights NGOs.
5. What was the purpose of NCW as outlined at its start?
6. List some of the special cases taken up by the NCW.

NOTES

### 6.4.1 Statistics, Acts and Other Declarations

After Independence, the Indian government introduced some committees and commissions for the development of women education in India, i.e. Radhakrishnan Commission or University Education Commission (1948), Smt. Durgabai Deshmukh committee (1959), Smt. Hansa Mehta Committee (1962) and M. Bhaktvatsalam Committee to look into the causes of public support particularly in rural area for girls education and public corporation. Kothari Commission (1964-64), Resolution on the National Policy on Education (1968), Report of the Committee on the status of women in India (1974),Challenge of Education (1985), and National Policy on Education (1986), Programme of Action (1986), and (1992). On the other hand to develop the primary education and to achieve the aim of universalization of primary education up to age level 6-14 years, some schemes or programmes like, OBB, DPEP, SSA, NLM, National Programme of Nutritional Support of Primary Education (NPNSPE) or (Mid-Day Meals), RTE Act 2009 and Knowledge Commission were introduced to achieve the national goal i.e. 100 per cent literacy.

Indian Constitution grants equality to women in form of fundamental rights, fundamental duties and directive principles. It empowers the state to frame and adopt measures to uplift women's status in the society.

The whole framework of India as democratic state is credited with various laws, policies, plans, programmes and commissions that are specially designed for women's progress in every sphere of life. The era after the Fifth Five-Year Plan (1974-78) has been a marked as shift in the approach and ideology towards women's issues of welfare and empowerment. In recent years, the empowerment of women has been recognized as the predominant concern in determining the status of women.

The National Commission for Women: established under the Act of Parliament in 1990 in order to preserve the rights and legal privileges of women.

- Reservation of seats in local bodies of governance i.e. Panchayats and Municipalities for women via the 73rd and 74th Amendments (1993) to the Constitution is another strong for their participation in decision making at the local levels.
- India has also ratified various international conventions and human rights instruments committing to secure equal rights of women. Key among them is the ratification of the Convention on Elimination of All Forms of Discrimination against Women (CEDAW) in 1993.
- The Mexico Plan of Action (1975), the Nairobi Forward Looking Strategies (1985), the Beijing Declaration as well as the Platform for Action (1995) and the Outcome Document adopted by the UNGA Session on Gender Equality and Development & Peace for the twenty-first century, titled 'Further actions and initiatives to implement the Beijing Declaration and the Platform for Action' have been unreservedly endorsed by India for appropriate follow up.
- The policy also takes note of the commitments of the Ninth Five Year Plan and the other policies relating to empowerment of women.
- The women's movement and a wide-spread network of Non-Government Organisations which have strong grass-roots presence and deep insight into women's concerns have contributed in inspiring initiatives for the empowerment of women.





NOTES

In the Report of the Committee on the Status of Women in India, 'Towards Equality', 1974 it was stated that 'there still exists a wide gap between the goals enunciated in the Constitution, legislation, policies, plans, programmes, and related mechanisms on the one hand and the situational reality of the status of women in India, on the other.'

There are various manifestations of gender disparity; the most noticeable one is the trend of continuous fall in female ratio in the total population in the last few decades. Social typecasting and violence at the domestic and social levels are some of the other manifestations. Discrimination against girl children, adolescent girls and women persists in many parts of the country. The underlying causes of gender inequality are related to social and economic structure, which is based on informal and formal norms, and practices.

Consequently, the access of women particularly those belonging to weaker sections including scheduled castes, scheduled tribes, other backward classes and minorities, a majority of whom are in the rural areas and in the informal, unorganized sector – to education, health and productive resources, among others, is inadequate. Therefore, they remain largely marginalized, poor and socially excluded.

### 6.4.2 Teacher Preparation in Gender Sensitivity

Teachers' education (D.Ed and B.Ed) text books should include textual material related to gender sensitivity.

- In view to make teacher trainees gender/caste sensitive they should be provided with appropriate information and training.
- Teachers training institutes should take special training from experts working in gender/human rights related areas. Besides, trainees should be motivated to prepare materials for gender/human rights sensitive instruction. This should form part of the curriculum.

Attention to gender/human rights issues—When writing or revising text books, definite attention should be paid to gender/human rights issues especially caste and violence against women, discouraging practices that discriminate against women.

- The visual medium should be used extensively as part of course curriculum and in text books since it has greater impact. Inclusion of list of films and documentaries be shown (optional as per facility available in school) to children on a regular basis which promote gender justice.
- Before writing text books anew, there should be a joint consultation with the heads of the text book committees and gender/human rights experts including representatives of women and child welfare departments.
- Before commencing to write or revise text books a list of principles related to gender/caste sensitivity should be prepared. Women's personal views, and values related to women should be proportionately represented in the text books, with space for women from vulnerable and marginalized sections.
- The special module developed by the committee should be tested, since both urban and rural areas need different approaches.

Gender training—Gender/human rights training, should be imparted to teachers, concerned officials, staff, including education officials at the block and district education offices, district education and training institutes, supervisors and the members of SDMC.

NOTES

- All training conducted by DIET, BRC, CRC should contain the subject of gender/ human rights
- To make sure that these institutions bear in mind gender/caste sensitivity in their training programmes a team of experts should conduct a review of the same at least once in two years.

Regular studies and reviews - Regular studies and reviews be conducted with regard to gender/caste sensitivity, by experts both from the field of education and gender/human rights. In the process of reviewing, if any obstacles detected immediate action should be taken towards remedying them.

Networking—In the process of bringing about gender equality in an educational environment, the department of education should network and work in close contact with those institutions working on gender sensitive issues.

- Gender related material prepared by voluntary organization and other stakeholders on gender related issues (posters, handbills, charts, pictures or visual media illustrating girl children's education, women's empowerment, education for adolescents, and other related topics) should be used.
- To impart information adequate arrangements should be made to organize training programmes from such institutions and experts, for teachers and teacher-trainees.

## 6.5 SUMMARY

In this unit, you have learnt that:

- In today's globalized world too, the goal of woman emancipation faces multiple, different obstacles. Many social reformers, NGO's and other organizations are working to fulfil the long desired dream of women to achieve better opportunities in society in order to ensure their value and integrity.
- Education is essential for a worthwhile human life and women and girls are not exceptions to the implication of this fact. Education of women is not important only because of its being entry point to a profession, but also because effect of educating a woman extends throughout her family and society at large.
- The thump of increased consciousness about women education is still to be felt as the incubation period of attitude shift is still very long. There is still a tremendous drop-out in secondary level of girl's education. But there is also developing trend to educate girls to get educated grooms, but with a long-term need for their developing into empowered human beings.
- Achieving better quality in terms of schooling and accomplishment levels of school-going children was an aim the government tried to fulfill with the medium of the program known as minimum levels of learning (MLL) and better infrastructural facilities.
- In a society that is increasingly run on technology, a high rate of scientific literacy is imperative for the growth of the economy, particularly for a large country like India, where a high percentage of the population is stuck in under developed and remote, poor areas.
- The skill and knowledge to use computers and associated technology effectively, ranging from basic to sophisticated skills, is counted as computer literacy.





NOTES

However, there is no clear definition of computer literacy and it can vary from individual to individual; since there are experts who do not consider a person who is largely only using a computer for data-entry jobs using applications like MS Word or Notepad an actual computer literate.

- While women are very much a part of the Indian economy, they have to face big challenges to be able to do so, just as they have to face injustices in society and their daily lives. The number of women who are a part of the labour force with regard to the total female population indicates how difficult it is for them.
- In villages, a trend has been seen that women do agricultural work in times of agrarian distress. In these times, they take any odd jobs that they can get to add to their family incomes that are proving to be inadequate.
- Independent NGOs, National Human Rights Commission (NHRC) and National Council for Women (NCW) have worked on many successful initiatives together as well as separately for the emancipation of Indian women, especially in rural and remote areas, where even basic necessities like water, sanitation and basic medical aid were not easily available. In this section, we will learn briefly about the roles these three entities have played.
- As the problem of violence against women is multi-layered, the NCW has adopted a multi-pronged strategy to tackle the problem. The Commission has initiated class of legal awareness among women, thus preparing them with the knowledge of their legal rights and with a capacity to use these rights. It assists women in rectify of their injustices through pre-litigation services.
- Special studies on social mobilization, maintenance and divorced women, Panchayat raj in action, women labour under contract, gender bias in judicial decisions, family courts, gender-component in various Commissions' reports on women, violence against women, women's access to health and education in slums to help in formulation of NCW's policies for recommendations are led by the NCW.
- After independence, Indian national government introduced some committees and commissions for the development of women education in India, i.e. Radhakrishnan Commission or University education Commission (1948), Smt. Durgabai Deshmukh committee (1959), Smt. Hansa Mehta Committee (1962) and M. Bhaktvatsalam Committee to look into the causes of public support particularly in rural area for girls education and public corporation.

## 6.6 KEY TERMS

- **Emancipation:** Efforts to procuring political rights or equality, often for a specifically disadvantaged group, such as women is called emancipation.
- **Gender sensitivity:** Gender sensitivity is the act of being aware of the ways people think about gender, so that individuals rely less on assumptions about traditional and outdated views on the roles of men and women.
- **Computer literacy:** It is defined as the knowledge and ability to use computers and related technology efficiently, with a range of skills covering levels from elementary use to programming and advanced problem solving.

NOTES

- **Scientific literacy:** It is the knowledge and understanding of scientific concepts and processes required for personal decision making, participation in civic and cultural affairs, and economic productivity.

## 6.7 ANSWERS TO 'CHECK YOUR PROGRESS'

1. In its broadest sense emancipation is rather a process not an end product. It is the process of assimilating knowledge and awareness of self which enable women to move forward in life with greater self-worth and self-assurance.
2. It means that a person should be able to ask questions, or determine answers to questions, derived from everyday experiences. The person should have the ability to seek explanations to natural phenomena rather than merely accepting prevailing judgments or accepting them as some sort of miracles.
3. One of the factors is the methods used to assess the degree of women's work. For example, the work a woman does in her home is not counted as a contribution to the economy and so does not get counted as 'labour', and in turn, is not considered in national income statistics.
4. Some important human rights NGOs are People's Union for Civil Liberties, People's Union for Democratic Rights, Human Rights Law Network, South Asia Human Rights Documentation Centre, Asian Centre for Human Rights, Amnesty International, Human Rights Watch, International Rehabilitation Council for Torture Victims (IRCT), Association for Prevention of Torture (APT), and Minorities Rights Group International.
5. In January 1992, the National Commission for Women (NCW), was established as a statutory body under the National Commission for Women Act, 1990 to review the constitutional and legal safeguards for women; recommend remedial legislative measures, facilitate rectification of grievances and advise the government on all policy matters affecting women.
6. Some important issues taken up by the NCW include sexual harassment at workplace, women in confinement, anti-arrack movement, issues concerning prostitution and political and technological empowerment of women in agriculture.

## 6.8 QUESTIONS AND EXERCISES

**Short-Answer Questions**

1. What is computer literacy? What is the level of computer literacy in India, as compared to other nations? How can the government ensure better rates of computer literacy?
2. Explain the present state of women in India, in terms of education and general conditions.
3. Write a note of scientific literacy and its presence in India.
4. What roles have NGOs played in upliftment of women in India?
5. How can teachers be gender-sensitized?



**Long-Answer Questions**

1. Discuss the problems faced by working women in India and analyse how these can be improved.
2. Write an essay on the role of NCW in empowerment of women in India.
3. Give the names and objectives of a few programs and schemes launched by the Government of India for promoting women's education.



NOTES

## 6.9 FURTHER READING

Bhatt, B.D. and Sharma, S.R.; *Women's Education and Social Development*, Kanishka Publishing House, New Delhi, 1992.

Rao, U.; *Women in Developing Society*, Astigha Publishing House, New Delhi, 1985.

Singh, U.K. and Nayak, A.K.; *Women's Education*, Commonwealth Publishing, New York, 1997.

# UNIT 7 GENDER STUDIES IN INDIA

NOTES

**Structure**

7.0 Introduction
7.1 Unit Objectives
7.2 Evolution of Gender Studies in India
7.3 Impact of Gender Studies on Women's Education
7.4 Gender Studies in North-East India
7.5 Problems of Girl Education in Arunachal Pradesh
7.6 Summary
7.7 Key Terms
7.8 Answers to 'Check Your Progress'
7.9 Questions and Exercises
7.10 Further Reading

## 7.0 INTRODUCTION

In India, the concept of gender studies is continuously evolving. When we talk about gender studies, many questions arise in our minds about this concept. The meaning, nature and characteristics of the concept of gender studies need proper explanations. The boundaries of this particular subject and its practitioners are ambiguous till date. Indeed, one would go so far as to say that compared to the women's movement in India, conceptions of gender studies are remarkably unclear. After all, one would imagine that, precisely by virtue of its academic orientation and the standard products of gender studies—books, reports, courses and so on—a much firmer grasp of the history and nature of gender studies would be available, especially, when compared to the considerably more inchoate and diffuse forms of a movement.

In this unit, we will try to understand the meaning and nature of gender studies and it evolution in India. A special reference to gender studies in the North-East, especially Arunachal Pradesh, has been made in this unit.

## 7.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Explain the concept of gender studies
- Describe the evolution of gender studies in India
- Analyse the impact of gender studies on women education
- Discuss gender studies in North-East India
- Elaborate on the different problems of girl education in Arunachal Pradesh

## 7.2 EVOLUTION OF GENDER STUDIES IN INDIA

Gender is one of the most prominent characteristics, which determines a person's place in any society. The first thing we notice about another person is gender. It shapes our expectations of that individual to a great degree. The expectations and

NOTES

requirements that a society has from an individual, based upon another person's gender, imposes certain constraints and limitations on the individual. Therefore, the questions that crop up are what exactly is gender and why do we need it? Where did gender come from? What forces shape gender?

One of the most important things that sociologists do is distinguish between sex and gender. Sex refers to whether a person is considered female or male based on the kind of body they have. Gender describes the ideas and practices that constitute femininity and masculinity. However, male and female and masculine and feminine are not necessarily clear and opposite categories. However, it is important as a starting point to think of sex as about the physical traits we have and gender as about social meanings.

Gender is a social construct, which is shaped by society, social institutions and agencies like family, religion and social norms and culture etc. These are learnt through the process of socialization and genderization. Sociologists are interested in the social construction of gender, which means looking at how the way that society is organized shapes us into particular kinds of women and men. This shaping happens through large-scale social organizations and through everyday interactions that we usually take for granted.

For example, how girls and boys should act social institutions like family and schools. This process of teaching us how to behave is called socialization and it is highly based on gender. But these institutions not only pass on ideas about how girls and boys are expected to act, but also channelize girls and boys into doing different kinds of things. Girls and boys are dressed in different kinds of clothes, take up different school subjects, usually end up in different jobs, and are portrayed differently in everything from magazines to movies to television shows. From birth, a girl child and a boy child are treated differently, and each day of their lives involves interacting with other people according to their gender.

Gender has long been viewed as a legitimate source for the allocation of right, power, privilege and responsibility (Risman and Johnson-Summerford, 1998). Gender is one of the forms of social stratification. There are differences and inequalities between men and women, in responsibilities that are assigned, activities undertaken, access to control over resources, as well as decision-making opportunities.

On issues like division of power, prestige and wealth women are considered unimportant and uninteresting. Even the hunting and gathering society men were superior to women. Factors such as socio-economic status, historical, ethnic and religious legacies, illness and disabilities, and immigration, all affect the day-to-day power relationships between partners in ways that limit options but may be invisible to the partners themselves.

Gender researcher Sunita Kishor (2006) identifies three important aspects of gender, namely:

1. Gender tends not to be value neutral. The roles, rights and obligations assigned to each sex are not just different, but also unequal with male roles and rights generally being valued more highly than female roles and rights.
2. Gender involves differences in power, both *power to* and *power over.* The concept of *power to* encompass legal and informal rights, access to resources and pursuit of knowledge and personal goals. It cuts across most domains of human functioning, including familial, cultural and institutional domains. *Power over* refers to control over societal and household resources, decisions, cultural and religious ideology, and one's own and others' bodies. Importantly, men tend to have greater power than women and in some domains, even have power *over* women.
3. Gender is not static or immutable. Being socially constructed, gender roles, rights, and expectations can change over time and across geographical space as societal needs, opportunities and customs change.





NOTES

According to Australian sociologist R.W. Connell (2002), '*Gender'* should be understood as the structure of social relations that centres on the reproductive arena, and the set of practices that bring reproductive distinctions into social processes. It is gender that gives us normative assumptions regarding masculine or feminine behaviour.

Gender used to be seen as the 'psychological, social, and cultural aspects of maleness and femaleness (Kessler and McKenna, 1978)—in other words, it represented the characteristics taken on by males and females as they encountered social life and culture through socialization. In the beginning, this conception of gender is not broad.

Even the people who believe that there are some important biological or genetic differences between women and men they agree that the natural (i.e., biological, physiological, or genetic) and the social cannot be cleanly separated. Scientists are discovering that these are not discrete realms. A second problem with this conception of gender is its tendency to assume that gender is an exclusively individual characteristic. In this view, gender is seen as sets of traits or behavioural dispositions that people come to possess based on their assignment to a particular sex category.

According to sociologist Barbara Risman (1998), 'Gender is something we do in order to make social life more manageable'.

According to the GMS manual: 'Gender is a term used to refer to the socially constructed characteristics that define and relate to male and female ways of being and behaviour within specific contexts. Gender also refers to the web of cultural symbols, normative concepts, institutional structures and internalized self-images which, through a process of social construction, define masculine and feminine roles and articulate these roles within power relationships.'

Wharton (2005) Amy S. a professor of sociology defined gender as a 'system of social practices; 'this system creates and maintains gender distinctions and it organizes relations of inequality on the basis of (these distinctions).' In this view, gender involves the creation of both differences and inequalities.

There are three features of this definition that are discussed below:

First, gender equals a fixed state in terms of being a process. This indicates that gender is consistently under production and reproduction. In other words, it can be said that gender is not just an expression, rather it is enacted or done, too. It is important to identify the approaches that make this happen.

Second, gender is not a simple aspect of people. Its occurrence is at every level of the social hierarchy. This is inherent in the concept of gender as a 'system' of approaches that are widespread, interlinked and not dependent on persons. Gender is thus a multilevel phenomenon (Risman, 1998). This awareness helps us to find out how socially interactive processes and social institutions function, comprise and replicate gender.

NOTES

Third, this definition of gender talks about its significance in systematizing unequal relations. Though it is a point to be argued upon, it needs to be investigated if gender differentiation is inevitably liable to result in gender inequality.

In general, gender studies are mostly influenced by the women movement. Basically, gender issues have political origin and act as medium of social reforms but when we talk about gender studies; our focus is more or less academic. The only problem about this concept is about its nature because it is not clear whether we are talking about a field of scholarship on women, about a 'subject' with its own curriculum, about specific gender studies programmes or centres, gender and feminism or about outreach and advocacy on gender issues. This kind of dubious generates a kind of freedom to the scholars that they can draw all kinds of conclusions about the concept in the present context. For example, one may conclude that it is ineffective and irrelevant concept while others may have different opinion and conclude that it is a popular and emerging field of study.

In order to understand its nature clearly in Indian context, it is mandatory to understand its evolution in pre- and post-Independence era. In this process, we should try to explore the ideas of two pioneering ladies worked a lot for these issues viz., Neera Desai and Vina Mazumdar. However, many other scholars equally contributed to this concept and we will try to analyse their views also in order to give a fuller sense of the difficulties and contradictions that have been part of the making of gender studies in India.

The period of social reforms evolved during nineteenth and twenteeth centuries in different parts of the country. During this period, many social movements were observed and central driving force in all these movement is the status of women or social problems of women. Different reformers agreed that the women education is need of the hour and women should not only be engaged in household work. The roots of gender biasness in Indian society lie in our tradition.

Most of the reformers from elite background and focused on the women as custodians of traditional cultural values. According to them, the women should play their role as wives and mothers and should support their husbands' to cope up with changing requirement of the society. Therefore, the idea of schools for girls only was promoted where different standards, different curricula and different instructional language. In other words, we can state that educational opportunities for women are not equal to men and most of girls never went beyond primary or secondary level. There are some exceptions like women universities of SNDT University, Pune, and Banasthali Vidyapeeth, Rajasthan.

However, most of commissions of pre-Independence period were of opinion that the curriculum for girls should be different from the boys. One of the most influential organization of pre-Independence period, namely All India Women's Conference (1927), demanded for common education pattern for boys and girls. Mahatma Gandhi also supported same concept through his ideas of 'basic education for all'. By the time of Independence in 1947, the importance of education for both boys and girls was widely accepted and endorsed. Different Articles of the Constitution of India namely Article 45, Article 16 and Article 15(3) are reflection of this philosophy.

## Gender Studies in the 1970s

It is evident from study of the Constitution of India that it guarantees the equality of opportunity for getting free and compulsory education till elementary level and no





NOTES

discrimination at any level on the basis of gender. Although the Constitution of India guarantees equal rights to women, in actual practice a 'persistent ambivalence' rest on women. In this era, modernity and traditional values are equally important. People talked about liberation of women from orthodox traditions as well advocated the preservation of traditional values of family through the role of women. Though this tenor of the first post-Independence, University Education Commission headed by Dr. Radhakrishnan was to change significantly in subsequent Commissions of the 1950s and 1960s (such as the Durgabai Deshmukh Committee on Women's Education, the Hansa Mehta Committee and the Kothari Commission), Desai and Mazumdar underscore that all these committees, whether headed by a man or a woman, whatever their political inclination, failed to articulate the relationship between women's equality, their participation in national development and the development of education itself (Desai, et al., 2003).

## Growth of gender studies centres

Before 1980s, no institute of higher education or university offered courses related to gender studies. The first centre of gender/women studies was established by one of the most prestigious postgraduate and research institution namely Tata Institute of Social Sciences, Bombay, in the year 1983. The centre had a focus on social work. One of renowned women activists' organizations of Hyderabad felt the need for an institutional forum in which activists and academics could work together. The Anuveshi Research Centre for Gender/Women Studies was established with a belief that universities and other academic institutions did not have the interdisciplinary institutional structures necessary for enabling gender studies, and that they would be too inflexible towards political engagement with a wider public sphere. The establishment of gender studies in Alagappa University represents a clear indication of the degree of regional and institutional variety in the country with a prominent focus on science and commerce courses.

Gender and Development (GAD) and Women in Development (WID) are often used interchangeably and programming with a gender focus is often thought to mean supporting more projects for women. It is important to remember that while these terms only incorporate 'development', they apply equally to relief in emergencies.

The WID approach usually seeks to integrate women into development by making more resources available to women, in an effort to increase women's efficiency in their existing roles. Very often, this approach has increased women's workloads, reinforced inequalities, and widened the gap between men and women.

The GAD approach seeks to base interventions on the analysis of men's and women's roles and needs, in an effort to empower women, to improve their position relative to men in ways which will benefit and transform society as a whole. GAD is thus driven by a powerful motivation to work for equity and respect for human rights for all people.

## Gender awareness

Gender cannot simply be 'stitched on' to existing development models, nor added into development and relief programmes as an extra component. Gender awareness is not a separate or additional issue to be addressed; it is a way of seeing, a perspective, a set of insights, which informs our understanding of people and society. As we have seen, gender is at the heart of human identity and all human attitudes, belief, and

NOTES

actions. We take it for granted. Yet, when we begin to look into it, and question our assumptions, we find that the world looks different.

Gender awareness means looking with new eyes, in a way which is constantly open to learning more. Looking into development and relief work with these new eyes reveals what is now well documented in countless examples from all over the world: that women's needs, as distinct from men's, have been invisible in most agency planning until very recently, with the result that many development and relief programmes have not only failed to bring any improvements to women's lives, but have made them worse. It was this realization, which led to the closer examination of the impact of development on women, and to the beginning of GAD analysis.

### Gender mainstreaming principles

As stated in key UN documents, and in those of other major international organizations, gender mainstreaming means:

(i) Forging and strengthening the political will to achieve gender equality and equity, at the local, national, regional and global levels;

(ii) Incorporating a gender perspective into the planning processes of all ministries and departments of government, particularly those concerned with macroeconomic and development planning, personnel policies and management, and legal affairs;

(iii) Integrating a gender perspective into all phases of sectoral planning cycles, including the analysis development, appraisal, implementation, monitoring and evaluation policies, programmes and projects;

(iv) Using sex-disaggregated data in statistical analysis to reveal how policies impact differently on women and men;

(v) Increasing the numbers of women in decision-making positions in government and the private and public sectors;

(vi) Providing tools and training in gender awareness, gender analysis, and gender planning to decision-makers, senior managers, and other key personnel; and

(vii) Forging linkages between governments, the private sector, civil society, and other stakeholders to ensure better use of resources.

### Gender budgeting

Gender budgeting is identified as a tool of women empowerment. The effect of budget on the lives of women is manifold. It pushes women's development straightaway by allocating budgetary funds for women advancement schemes. The budget is an important tool in the hands of state for affirmative action to improve gender relations through reduction of gender gap in the development process. It can also reduce economic inequalities between men and women.

Gender Responsive Budgeting is well recognized as an important tool for enabling gender mainstreaming. The Eleventh Plan had affirmed: 'Gender Budgeting and Gender Outcome assessment will be encouraged in all Ministries/Departments at Central and State levels as Gender Budgeting helps assess the gender differential impact of the budget and takes forward the translation of gender commitments to budgetary allocations.'





NOTES

In 2004–05, Ministry of Finance mandated the setting up of the Gender Budgeting Cells (GBCs) in all Ministries/Departments as focal points for mainstreaming gender. So far fifty-six Ministries/Department have set up the Gender Budgeting Cells. Furthering the process, the Ministry of Finance issued a Gender Budgeting Charter on 8 March 2007. To build the capacities of functionaries and stakeholders at all levels, a Gender Budget Scheme was launched by MWCD in the Eleventh Five-Year Plan, through which more than 1000 persons have been trained..

## 7.3 IMPACT OF GENDER STUDIES ON WOMEN'S EDUCATION

Education has the vital importance in almost every sphere of women's empowerment. There is little argument that ending illiteracy among women raises their capabilities, enhances their agency, and involves them in the development process. Women's education is basically very critical since this is their human right and is exigent for the advancement of most of their capacities.

Jawaharlal Nehru stated, 'if you educate a man you educate an individual, however, if you educate a woman you educate a whole family. Women empowered means mother India empowered'.

The relationship between education and development is also a dialectical one. V.K. Ramachandran (1996) has shown that rising literacy rates in Kerala were closely linked to falling barriers of caste, class, race, and religion and that, in turn, the reduction of these barriers has been a key factor in furthering the spread of education.

Studies have also linked education levels to lower rates of malnutrition, higher levels of economic empowerment and productivity, lower wage differentials, higher sex ratios and lower mortality rates. The increase in women's education from 1970 to 1995 is one indicator of women's empowerment that has contributed to a reduction of more than 50 per cent in the prevalence of underweight (Smith and Haddad, 1999). Studies have found that secondary education for women confers the greatest benefit and that education is most beneficial to mothers when they also have moderate access to resources and wealth (Reed et al., 1996; Malhotra et al., 2003). There are intrinsic and extrinsic benefits to education (Sen, 1997), not the least of which is that educated women are strong positive role models for female children and other mothers.

India's record in education, however, is dismal at best. After sixty-six years of Independence, literacy rates are still low and disparities based on caste, religion, gender, and region still exist in access to education, the quality of that education, and the benefits that arise from it. Historical biases against the education of women are pervasive, especially in rural areas where education is most sorely needed.

The Government of India has expressed a strong commitment towards education for all; however, India still has one of the lowest female literacy rates in Asia. In 1991, less than 40 per cent of the 330 million women aged seven and over were literate, which means today there are over 200 million illiterate women in India. This low level of literacy not only has a negative impact on women's lives but also on their families' lives and on their country's economic development.

Numerous studies show that illiterate women have high levels of fertility and mortality, poor nutritional status, low earning potential, and little autonomy within the

**Check Your Progress**

1. How has Wharton defined gender?
2. When and where was the first centre of gender/women studies established in India?
3. What role does GAD approach play in women empowerment?
4. What is the benefit of Gender Responsive Budgeting?

NOTES

household. A woman's lack of education also has a negative impact on the health and well-being of her children. For instance, a recent survey in India found that infant mortality was inversely related to mother's educational level. Additionally, the lack of an educated population can be an impediment to the country's economic development.

Since Independence, the issue of education, and women's education in particular, has increasingly come into the focus of Indian policymakers.

An Article of Indian Constitution states 'free and compulsory education for all children until they complete the age of 14' (The World Bank, 1997b). The National Policy on Education, which was amended in 1992, and the Programme of Action (1992), both acknowledged that the government was committed to raise the level of literacy, by focusing specifically on girls and children from scheduled castes and scheduled tribes.

The Sixth Five-Year Plan (1980–1985) prioritized the eradication of illiteracy in conjunction with income-generation schemes leading to the establishment of the Non-Formal Education Centres (NFEs) all over the country that have sought to link the benefits of education and employment, and make education possible for working and poor women. The Eighth Five-Year Plan (1992–1997) expressed these changing priorities in increasing budget allocations to elementary education. With the New Economic Policy being implemented in 1991, the Eighth Plan also sought to compensate for the costs of structural adjustment by promising higher-education expenditure and a higher allocation of that expenditure to primary education.

The Sarva Siksha Abhiyan's focus on creation of educational infrastructure and improving quality of education in rural areas has had positive outcomes. It has led to rise in the Gender Parity Index (GPI) in primary (0.94) as well as upper primary (0.92) education. Enrolment of girls at the primary level increased by 8.67 per cent (86.91 per cent in 2001–2002 to 104.7 per cent in 2009–2010), and at upper primary level by 13 per cent (52.1 per cent in 2001–2002 to 65.1 per cent in 2004–2005).

The challenge, however, remains that the high enrolment rate has not translated into high attendance rates as well. According to the India Human Development Report, 2011, the national attendance rates during the year 2007–2008 at primary and upper primary levels were 82 per cent and 60 per cent, respectively. Therefore, despite attaining high enrolment rates of 96 per cent at the primary level, the attendance rates remain low. This needs to be addressed to enable women to access education that gives them employability.

The National Literacy Mission or Saakshar Bharat Mission, with its objective of extending educational options to those adults who have no access to formal education, targeted female literacy as a critical instrument for women's empowerment. This has led to an increase in literacy, among women, from 53.67 per cent (Census, 2001) to 65.46 per cent (Census, 2011). It is also for the first time that of the total of 217.70 million literates added during the decade, women (110.07 million) outnumbered men (107.63 million).

## 7.4 GENDER STUDIES IN NORTH-EAST INDIA

One may get surprised to know that North-East is better off than that of the nation as a whole in terms of gender equality. This is because of the fact that this region of the country consist of many ethnic groups who, by and large, do not believe in sex





NOTES

discrimination. However, some inequality exists in terms of access to education, employment and health. This gap may also be observed in political participation of women at both national and state level. Among the North-Eastern states, Meghalaya, Manipur and Mizoram show relatively lesser degree of gender inequality in terms of work participation, literacy, infant mortality and sex ratio. The situation is, however, adverse in case of Tripura, Assam and Sikkim. Education, employment and health are only the enabling factors that may not guarantee the achievement towards the goal, which, however, largely depends on the mindset of the people.

Women constitute half of the population. The Fundamental Rights and the Directives Principles of State Policy mentioned in the Constitution have been formed keeping non-discrimination in mind. The Indian Constitution extends equal rights and opportunity to all. However, the grim reality is that women are treated differently from men. In Assam, the status of women is comparatively higher than the rest of the nation. One significant feature of the Assamese community is that women are not expected to bring dowry after marriage. And yet, off late Assam has registered a few cases of dowry deaths. The sex ratio is an important factor through which the status of women in society can be gauged. It appropriates to what extent she enjoys those basic rights of survival, protection and development. Education is one way of determining the average position. The phenomenon of school dropout is a negative indicator of educational attainment. The dropout rates have been higher for girls. Female work participation is another indicator of social acceptance and status in society. Assam is moderate in terms of human development and gender equality.

In terms of occupation, Assam predominantly has an agrarian economy which is characterized by high women's participation. This, however, does not (rather has not) positively benefited women in any substantial way. The work participation rate of women in Assam is considerably lower than that of men in general except in the primary sector where the rates favour women.

Education is the most important requirement in improving women's status in society. An educated woman can face the vagaries of life with competence and without fear. Developing a positive attitude towards women is important as it helps to remove gender inequalities and injustice. All efforts made by the government to empower women can be effective once people's attitude towards women change. The need to generate awareness among women is urgent as it is their well-being which is at stake. They ought to be made aware of their rights and liberties. Along with this, they must also understand the different forms of oppression.

Given the recent scenario, the episode of a girl being publically abused by a mob of men may not perhaps be common occurrence in Assam. But, it is part of the growing landscape of brute force and violation as seen against women. The national crime report bureau has reported a steady increase in the crimes against women—notably domestic violence, sexual crimes, dowry deaths, kidnapping and trafficking, especially in the last two decades, in which Assam has the highest recorded yearly incidence rate.

Many Assamese may be surprised to learn that their state is safer for women as compared to some cities of Northern India. It is also interesting to note how every statement on crime is contrasted with an acknowledgment of the emancipated status of Assamese women. As an agrarian society, it does (like any other patriarchal society) does measured little to benefit women. This is common to Assam as well. Historically, the incorporation of non-Aryan practices with the Aryan culture helped break the

NOTES

monopoly of hardline practices such as *sati*. Nevertheless, the position of women remained within the domestic sphere. This practice was common in India where women were discouraged from entering into any mainstream practice.

Ancient Medieval and Assamese literature abounds in references to women's lower status in Assam. A late 19th century treatise on women eulogizes women as caregivers and mothers. Thus, Assamese women, although not as deprived as other women in other parts of the country still occupy an inferior status as compared to men. Along with this, globalization has introduced many new ways of imagining the modern world. It has made several spaces open to women which were not traditionally unwelcoming of their presence. Social media sites have added to this and allowed women to acquire a voice of their own.

## 7.5 PROBLEMS OF GIRL EDUCATION IN ARUNACHAL PRADESH

Arunachal Pradesh is one of most remote state of the country. The situation of girl education in Arunachal Pradesh is very disappointing. It is a fact that at a perspective which aims at enlargement of human capabilities as one of its core concerns cannot remain oblivious to the striking disparities between males and females in all spheres of life. The right to lead a long, healthy and productive life is fundamental to the idea of human development.

The capacity to lead a meaningful life includes, among other things, access to a set of entitlements that ensures survival and a certain basic minimum quality of life for individuals. Gender differences in providing basic facilities access reflect deep-rooted biases in social structures and belief systems. Greater gender justice in the distribution of food, healthcare and other resources helps in ensuring the survival and health of women. Women's work, autonomy in making reproductive choices, and their relative status in the family and community, also has a bearing on their survival and well-being.

In Arunachal Pradesh, life expectancy at birth for women is estimated to be 54.51 years. This data is slightly higher than the male life expectancy in the State, 53.66 years. At the district level, in four out of the thirteen districts, life expectancy for men is estimated to be higher than that for women. This life expectancy is lower than national data that is around sixty-four. If we analyse educational status, the situation is also very disappointing, especially in rural areas, and gender discrimination may be treated as a reason for low enrollment and retention of women in elementary, secondary and higher level in the state.

Kasturba Gandhi Balika Vidyalaya (KGBV) is a scheme launched in July 2004 in the state, for setting up residential schools at upper primary level for girls belonging predominantly to the SC, ST, OBC and minority communities. The scheme is being implemented in educationally backward blocks of the country where the female rural literacy is below the national average and gender gap in literacy is above the national average. The scheme provides for a minimum reservation of 75 per cent of the seats for girls belonging to SC, ST, OBC or minority communities; and priority for the remaining 25 per cent, is accorded to girls from families below poverty line.

The National Evaluation of the KGBV scheme was undertaken between 29th January to 20th February, 2007, in twelve States of Karnataka, Tamil Nadu, Andhra





NOTES

Pradesh, Madhya Pradesh, Rajasthan, Gujarat, Jharkhand, Bihar, Himachal Pradesh, Uttar Pradesh, Arunachal Pradesh and Orissa, with twelve independent experts in girls education and another joint evaluation of NPEGEL and KGBV scheme was also undertaken between 19th November to 14th December, 2007, in states of Assam, Manipur, Chhattisgarh, Maharashtra, Haryana, Punjab, Jammu and Kashmir, Uttarakhand, Meghalaya, West Bengal, Mizoram, Tripura and Dadar and Nagar Haveli.

**Activity**

1. Use the Internet and derive a model of 'gender inequality' referring to its evolution and present the same in the form of a flow chart.
2. Draw a parallel between the concept of 'gender' as it was in earlier times and as it is today in society.

**Did You Know**

The Millennium Development Goals (MDGs), which are set out in the United Nations Millennium Declaration of September 2000, provide a clear and shared vision of development priorities and tasks.

## 7.6 SUMMARY

In this unit, you have learnt that:

- Gender is a social construct, which is shaped by society, social institutions and agencies like family, religion and social norms and culture etc. These are learnt through the process of socialization and genderization.
- Basically, gender issues have political origin and act as medium of social reforms but when we talk about gender studies; our focus is more or less academic.
- Although the Constitution of India guarantees equal rights to women, in actual practice a 'persistent ambivalence' rest on women.
- The first centre of gender/women studies was established by one of the most prestigious postgraduate and research institution namely Tata Institute of Social Sciences, Bombay, in the year 1983.
- Gender and Development (GAD) and Women in Development (WID) are often used interchangeably and programming with a gender focus is often thought to mean supporting more projects for women.
- Gender budgeting is identified as a tool of women empowerment. The effect of budget on the lives of women is manifold. It pushes women's development straightaway by allocating budgetary funds for women advancement schemes.
- The Eleventh Plan had affirmed: 'Gender Budgeting and Gender Outcome assessment will be encouraged in all Ministries/Departments at Central and State levels as Gender Budgeting helps assess the gender differential impact of the budget and takes forward the translation of gender commitments to budgetary allocations.'

**Check Your Progress**

5. What was the focal point of National Policy on Education and the Programme of Action (1992)?
6. What is the aim of Kasturba Gandhi Balika Vidyalaya (KGBV) scheme?
7. State whether True of False
   (i) Northeaster women face inequality in terms of access to education, employment and health.
   (ii) In Assam, the status of women is comparatively higher than the rest of the nation, but they are expected to bring dowry.
   (iii) Life expectancy of women in Arunachal Pradesh is higher than the male in the state, but lower in comparison to the rest of the nation.

NOTES

- The increase in women's education from 1970 to 1995 is one indicator of women's empowerment that has contributed to a reduction of more than 50 per cent in the prevalence of underweight.
- The Sarva Siksha Abhiyan's focus on creation of educational infrastructure and improving quality of education in rural areas has had positive outcomes. It has led to rise in the Gender Parity Index (GPI) in primary (0.94) as well as upper primary (0.92) education.
- The National Literacy Mission or Saakshar Bharat Mission, with its objective of extending educational options to those adults who have no access to formal education, targeted female literacy as a critical instrument for women's empowerment. This has led to an increase in literacy, among women, from 53.67 per cent (Census, 2001) to 65.46 per cent (Census, 2011).
- Among the northeastern states, Meghalaya, Manipur and Mizoram show relatively lesser degree of gender inequality in terms of work participation, literacy, infant mortality and sex ratio.
- In Assam, the status of women is comparatively higher than the rest of the nation. One significant feature of the Assamese community is that women are not expected to bring dowry after marriage.
- If we analyse the education status in Arunachal Pradesh, the situation is very disappointing; especially in rural areas. Gender discrimination may be treated as a reason for low enrollment and retention of women in elementary, secondary and higher levels in the state.

## 7.7 KEY TERMS

- **Gender budgeting:** It promotes women's development by allocating budgetary funds for women advancement schemes.
- **Gender:** It structure of social relations that centres on the reproductive arena, and the set of practices that bring reproductive distinctions into social processes.
- **Literacy rate:** It is proportion of the population over age fifteen that can read and write.

## 7.8 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Wharton (2005) defined gender as a 'system of social practices; 'this system creates and maintains gender distinctions and it organizes relations of inequality on the basis of (these distinctions).'
2. The first centre of gender/women studies was established by one of the most prestigious postgraduate and research institution namely Tata Institute of Social Sciences, Bombay, in the year 1983.
3. The GAD approach seeks to base interventions on the analysis of men's and women's roles and needs, in an effort to empower women, to improve their position relative to men in ways which will benefit and transform society as a whole. GAD is thus driven by a powerful motivation to work for equity and respect for human rights for all people.
4. Gender Responsive Budgeting is well recognized as an important tool for enabling gender mainstreaming. The Eleventh Plan had affirmed that 'Gender Budgeting and Gender Outcome assessment will be encouraged in all Ministries/ Departments at Central and State levels as Gender Budgeting helps assess the gender differential impact of the budget and takes forward the translation of gender commitments to budgetary allocations.'
5. The National Policy on Education, which was amended in 1992, and the Programme of Action (1992), both acknowledged that the government was committed to raise the level of literacy, by focusing specifically on girls and children from scheduled castes and scheduled tribes.
6. Kasturba Gandhi Balika Vidyalaya (KGBV) is a scheme launched in July 2004 in many states of India, including Arunachal Pradesh, for setting up residential schools at upper primary level for girls belonging predominantly to the SC, ST, OBC and minority communities.
7. (i) True (ii) False (iii) True.





NOTES

## 7.9 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. Write a short note on the concept of 'gender'.
2. What developments took place in gender studies during 1970s in India?
3. As per the UN documents, what are the gender mainstreaming principles?
4. Write a short note on literacy rates in India.

### Long-Answer Questions

1. Give a detailed account on the evolution of gender studies in India.
2. Explain the impact of gender studies on women education.
3. Describe the gender studies in Northeast perspective.
4. Write a short note on the problems of girls' education in Arunachal Pradesh.

## 7.10 FURTHER READING

Krishnaraj, M.; 'Women's Perspective on Public Policy in India', *Gender, Technology and Development*, Sage Publications, New Delhi, 2002.

Sharma, A. (Ed.); *Women in Indian Religions*. Oxford University Press, New Delhi, 2002.

Mahajan, V.D.; *Modern Indian History*, S. Chand and Sons Publishing, New Delhi, 2010.

Sarkar, L. and Sivaramayya, B. (Eds.); 1996. *Women and Law–Contemporary Problems*, (Selection from papers presented at the four National Conferences on Women's Studies held in 1982, 1984, 1986, and 1988), Vikas Publishing House, New Delhi.

# UNIT 8 PRESENT STATUS OF WOMEN'S EDUCATION IN INDIA

**Structure**

8.0 Introduction
8.1 Unit Objectives
8.2 Direction of Research in Education
8.3 Retention, Apathy at Home, Child Labour and Early Marriage
8.4 Discontinuance of Outdated Laws and Positive Attitude Towards Girl's Education
8.5 Importance of SSA in Girl's Education
8.6 Summary
8.7 Key Terms
8.8 Answers to 'Check Your Progress'
8.9 Questions and Exercises
8.10 Further Reading

## 8.0 INTRODUCTION

With 1,220,800,359 million people, India stands second as the most populous country in the world. It is a developing nation with a GDP of $4.761 trillion in 2012. It is the fourth most developed economy in the world. Education, however, remains a challenge, especially for female. A 2009 Indian government report shows that the drop-out school rate was of 25 per cent and includes girls and also poor and disabled children. According to official figures, literacy rate in India of people between ages 15 and over is of 61 per cent. By sex, 73 per cent of the Indian men can read and write, while 47 per cent of the women are able to do these basic things. This unit will study the direction of research work in the educational sector. It will also examine the hurdles, such as, child labour and early marriage, for lack of education in the country. Importance of Sava Shiksha Abhiyan in girl's education will also be discussed.

## 8.1 UNIT OBJECTIVES

After going through this unit, you will be able to:

- Describe the direction of research in education
- Explain how factors like child labour and early marriage have halted the growth of education
- Discuss laws that have brought in positive attitude towards girl's education
- Explain the importance of Sarva Shiksha Abhiyan in girl's education

## 8.2 DIRECTION OF RESEARCH IN EDUCATION

Systematic efforts have been made to promote educational research in India after Independence. Trends in educational research have also been documented. Prominent

NOTES

among them are the five surveys of research in education (Buch, 1974, 1979, 1987, 1991; NCERT, 1997).

The first survey of research in education contained 729 research abstracts, the second survey contained 806 research abstracts, the third contained abstracts of 1481 studies, the fourth included abstracts of 1652 researches and the Fifth survey contained 1828 research abstracts.

By the period of the first survey, the maximum number of studies was related to educational evaluation and examination, which was followed by the development of tests and measurement. The educational evaluation procedures and examinations have been the subject of extensive research. Related to this has been the development of tests and measurement procedures for the assessment of psychological and educational characteristics of children. The development of tests was at its peak in the 1960s and 1970s and there was a decline in subsequent years. The decline was so prominent that the fifth survey did not contain a separate chapter on tests and measurement. There were only few researches which were included in educational evaluation and examinations.

In the first survey a relatively higher number of studies related to curriculum, sociology of education, psychology of education, educational administration, and teacher education were reported. The curriculum related studies were at their peak by the period of the third survey and thereafter a decrease in the number of such studies is observed. The studies in the field of sociology of education recorded a five-fold increase by the period of the third survey but thereafter a decrease in the number of studies is observed. Studies in the field of psychology of education have consistently increased over the years. Apparent decreases may be due to the fact that the contents of educational psychology split into different chapters, such as cognitive, social processes, motivation and mental health. A considerable improvement is observed in the area of educational administration and management till the period of the third survey; however, a decline is observed in the fourth and fifth surveys. Teacher behaviour and teacher education are other areas where one observes considerable growth overtime. Foundation areas, such as philosophy of education, history of education, and economics of education, have not shown considerable growth. In the second survey, areas such as comparative education, higher education and non-formal education were also included. To examine the role of technology in education, increasingly greater numbers of studies have been conducted over the years. Language education was additionally included in the third survey as a separate area.

The fourth survey included subject specific and discipline specific researches such as social science, science, and mathematics education as well as pre-primary education, primary education and vocational and technical education. These studies were covered in the earlier surveys in various foundations and other areas. Also included were areas like women's education, and the education of the disadvantaged and children with special needs. In the majority of these areas one observes an increase in the number of studies from the fourth to the fifth survey. In the fifth survey, studies related to physical education, art and aesthetic education, distance education, policy research were also covered. However, scant attention has so far been given to policy related researches. In general, except psychology of education, one observes a decline in the studies in the foundation areas over the years.

Researchers are now focusing more in subject-specific educational domains and on socially-relevant issues such as the education of the disadvantaged, women's





NOTES

education, and so forth. Due to increasing stress and early burnout, there is also a trend of incorporating variables of positive psychology viz. personal well-being, psycho-neural well-being, spirituality, emotional intelligence, self-esteem, etc.

## 8.3 RETENTION, APATHY AT HOME, CHILD LABOUR AND EARLY MARRIAGE

Since 1950, it has been a constitutional commitment of the government to provide free and compulsory elementary education to all children up to the age of fourteen years. This meant that by 1960 all children should have been enrolled in schools. But the availability of educational facilities with respect to the target set was way too ambitious. The target date was, hence, altered and till 1960, all efforts were driven towards the provision of providing basic schooling facilities. It was only after the near realization of the goal of access that other components of universal elementary education (UEE), such as universal enrolment and retention, started receiving attention of planners and policy makers.

### Problem of Retention

The constitutional obligation faced yet another hurdle, that of retaining children in schools. This was probably a bigger obstacle that problems of access and enrolment.

'Achieving enrolment in school is not a problem. The real problem lies in keeping students in school and making sure they attend class regularly.' This was the view of the educationists and people associated with spreading elementary education.

Dropout may be regarded as a phenomenon of the Indian education system, extending over all levels, across all the socio-economic groups and across the country. The dropout rates are much higher for educationally backward states and districts. Girls in India tend to have higher dropout rates than boys. Similarly, children belonging to the socially disadvantaged groups like Scheduled Castes and Scheduled Tribes have higher dropout rates in comparison to the general population.

There are also regional and location wise differences and the children living in remote areas/urban slums are more likely to drop out of school. Failure to complete high school not only produces negative outcome for the individuals, but also widens the existing social and economic inequalities. To reduce wastage and improve the efficiency of education system, the educational planners need to understand and identify the social groups that are more susceptible to dropout and the reasons for their dropping out.

### Reasons for dropping out

1. Vicious circle of illiteracy: illiterate parents find education unimportant and don't send their wards to schools.
2. Unuseful curriculum: students find school subjects unuseful in their daily lives.
3. Timing: most students drop out from the school because of the timing especially girl students.
4. Lack of facilities, teachers and even an adequate building.

NOTES

5. Economic status: yet being free education, people from low socio-economic status consider, spending half of the day in school, waste of time and money, as the ward could have help in daily chores and earn more.
6. Problem of child labour in India

Children are future citizens of the nation and their suitable development is of utmost significance for the country. Sadly, child labour swamps children across the world. According reports of UNICEF, the world is home to 1.2 billion individuals aged 10-19 years. The data shows variation in occurrence of child labour across the world and the statistical figures about child labour are very distressing. There were an estimated 186 million child labourers worldwide. The 2001 National Census of India estimated total number of child labour aged 5–14 to be at 12.6 million.

The term 'child labour' can be defined as work/labour that snatches childhood from children, their potential talents and their dignity, and that is damaging to their physical and mental development. It refers to work that hampers their education by depriving them of the opportunity to join school, making them drop out from school or to combine school with excessive burden of work.

## Child Labour and Education

A number of policies, plans, laws and programmes have been framed in the country with the basic objective of tackling the problem of the rapidly increasing child labour. The articulation of a new National Child Labour Policy, the portrayal of the Child Labour (Prohibition and Regulation) Act 1986, the establishment of a task force on child labour, the acceptance of the Convention on the Rights of the Child and so on are some of the efforts of this process. Equivalent efforts were put in the associated area of education. New education policy was launched as a separate component for ripping off the problem of child labour from its roots.

But the government policies on child labour are solely based fundamentally flawed assumptions. The legislative mechanism designed by the government is the mere an expression of the influence of the assumptions made by the policy makers in regard to child labour. The Child Labour (Prohibition and Regulation) Act, 1986, itself talks more of regulation than prohibition of child labour. Child labour is prohibited only in certain sectors (Part A and Part B of the Schedule) lay down under the act which provides for regulation in certain other areas. At the same time, there is a proviso which lays down that '... nothing in this section shall apply to any workshop wherein any process is carried on by the occupier with the aid of his family or to any school established by, or receiving assistance or recognition from Government'.□

There are many loopholes in legislative measures against child labour. An analysis of data indicates that the acts, laws and legal policies have achieved very little. In this case, where the government itself has kept on the assumption that child labour cannot be eliminated and that certain forms of child labour are unavoidable, it is even less likely to serve any purpose.

The legislative mechanism is only the first step in a process. The crucial aspect, however, is the subsequent step in this process which involves constructive rehabilitation of the child withdrawn from work.

It is through education only through which faulty assumptions of society can be removed and awareness regarding elimination of child labour can be developed. The New Education Policy is harmonized with the Child Labour Policy made major efforts





NOTES

to bring back the drop-outs and non-enrolled children into the education system through non-formal education (NFE). The NFE is to provide education for working children. It was proposed as an alternative to the formal education as the facilities of primary schools would do little to help the poor who dropped out, whereas the system of non formal education was targeted to meet the needs of the working children. The target group includes drop-outs, children of weaker sections, girls in the age group of 6-14 years and boys and girls who are employed in professions like carpet weaving and so on. The NFE have a flexible curriculum according to the needs of the working children and the youth. Classes are to be held according to the schedule of children.

The NFE system is facing a lot of criticism on the grounds of limited number of teachers and that too underpaid and an atmosphere not conducive to learning for working children after a full day's work. Thus, given the fact that the poor have to send their children to work, the NFE provides a convenient framework of education which does not interfere with the child's work. In the context of Article 32 what the NFE has done is that, in providing a solution to the problem of child labour interfering with the child's education, it has provided a system of child education which does not interfere with child labour.

## Early Marriage

Child marriage is the most unfair felony, in the name of tradition, towards children. It is violation of children's rights, irrespective of gender. It robs the innocent spirit of a child and basic rights to education, health, nutrition, freedom from exploitation, violence and abuse.

UNICEF defines child marriage as marriage before eighteen years of age and considers this practise a violation of human rights. The harmful consequences of child marriage are segregation from family and friends, limiting the child's interactions with the community and peers, lack of opportunities for education.

According to the 2001 Census in India, 1.5 million girls under the age of fifteen were already married. Out of these, 20 per cent were mothers to at least one child. It is reported that states like Rajasthan, Uttar Pradesh, Madhya Pradesh, Jharkhand, Chhattisgarh, Bihar and Andhra Pradesh still have average age of marriage below the legal age of eighteen for females. Due to early marriage, early pregnancies occur even though biologically the girls are not ready to handle the stress of pregnancy, and as a result, young mothers give birth prematurely or to low weight babies. This is dangerous for the health of the child and mother and often they do not survive. Child marriage is also responsible for domestic violence, sexual violence towards girls and deprives them of an education.

## Harmful effects of child marriage

Child marriage is a harmful phenomenon which has adverse effects on the child and on the society as a whole. For both girls and boys, early marriage is damaging to physical, intellectual, psychological and emotional abilities and also cuts off all the educational opportunities and chances of personal growth. As compared to boys, early marriage has more frequent and intense impact on girls. The after-effects of child marriage are for girls are way too terrible; they are forced to early childbearing and complete social isolation. They have to drop out of school and are exposed to higher risk of domestic violence and abuse, increased economic dependence, denial of decision-making power, inequality at home, which further perpetuates discrimination and low status of girls/women.

### Child marriage and health

Several health related issues are associated to child marriage, especially to young brides, as early marriage results in early and repeated pregnancies at tender age when they are neither biological nor psychologically ready for child bearing. Girls of age 15-19 are more likely (66.6%) to experience delivery complications compared to 30-34 year-old women (59.7%) and infant and child mortality rates are much higher for younger girls, as shown in the graph below. Risks of HIV/AIDS infection are higher among young girls as their negotiation skills and experience to ensure a healthy sexual life are less developed.

### Child marriage and education

Even today in many families, investing in girls' education is seen as a waste of financial resources since it is believed that educating a girl is beneficial only for husband's household. So girls are married off quickly and as a consequence they drop out of school.

In urban areas of India, only half of the total numbers of girls between 15-17 years of age attend school. The problem is even more acute in rural areas, where less than a third of the girls in the same age group attend school. About 5.8 per cent of girls in the age group 6-17 years in rural areas dropped out of school as they got married (NFHS 2005-2006).

### Child marriage and protection

Girls who are married at a younger age tend to be more prone to be victims of domestic violence and abuse. They are supposed to be fully devoted to household chores with limited alternative means to earn a living and personal growth. For both boys and girls, child marriage translates into no freedom of choice regarding their future.

### Reasons of child marriage in India

There are many factors which are responsible to support the continuation of the practice of child marriage in India. Poverty and social norms meant to ensure family honour and protect girls are significant factors that increase the risks for a girl to be married while still a child. These factors manifest themselves in the following collective and individual attitudes and beliefs which are still widespread in India:

- Girls are considered a liability and obligation to family honour. Child marriage is an easy way out to ensure chastity and virginity of the bride, thus avoiding hypothetical dishonouring of the family.
- Dowry perpetuates child marriage as it encourages parents to marry off their girls early to avoid an increase in the dowry amount (more educated girls usually require a higher dowry). Although giving or receiving dowry is a crime under the Dowry Prohibition Act, 1961, it is still a common practice.
- Girls are considered an economic burden for their family of origin and '*paraya dhan*' or property that belongs to the marital family. Hence, the tendency is to marry girls as early as possible and reduce investment in their daughters.
- Investing in girls' education is not considered worthy as girls will be moving to the groom's household and will be employed in household chores. On the other hand, the limited education and livelihood options for girls lead to marriage being one of the few options for girls' future.
- With the aim of reducing the costs of wedding ceremonies parents often marry off their children early seizing the opportunity of collective/community marriage ceremonies marrying off all girls/daughters in one ceremony when there are multiple daughters in a family, and coupling a wedding with other celebrations held in the community.
- Impunity, weak law enforcement and limited knowledge of the law by society perpetuate child marriage.
- Attendance of child marriages by local politicians and government officials contradicts their role as duty bearers against child marriage. Skewed sex ratio in some states has led to trafficking of girls in the name of marriage

## 8.4 DISCONTINUANCE OF OUTDATED LAWS AND POSITIVE ATTITUDE TOWARDS GIRL'S EDUCATION

There are many laws that are not relevant in the present context and Indian government discontinues such laws through different amendments. In this section we will discuss different Acts and laws that helped in developing positive attitude towards girls and their education. Along with the laws we will also discuss the role of different government and non-government agencies working for this cause and contributing significantly.

The Government of India has approved the Prohibition of Child Marriage Act in 2006, substituting the Child Marriage Restraint Act, 1929. The Compulsory Registration of Marriages Act, 2006, the Dowry Prohibition Act, 1961 and Right to Free and Compulsory Education Act, 2009, reinforce India's legal framework against child marriage.

Prohibition of Child Marriage Act, 2006

- The legal age for marriage is eighteen years for females and twenty-two years for males
- Child marriage is an offence punishable with rigorous imprisonment, which may extend to two years, or with fine up to ₹1 lakh, or both
- Child marriage is a cognizable and non-bailable offence
- Child marriages are voidable and can be annulled
- Persons who can be punished: those performing child marriages; male adults above eighteen years marrying a child; and persons responsible for the child (i.e. parent, guardian promoting, permitting, participating or failing to prevent a child marriage)

In addition to the national legal and policies to eliminate child marriage, the central and state governments have many initiatives in place to address child marriage indirectly by focusing on the development of the girl child and promoting girls' education. At central government level, such schemes and programmes include:

**Check Your Progress**

1. What is the dropout phenomenon?
2. What are the contemporary issues in educational research?
3. How does UNICEF define child marriage?

### 1. Ministry of Women and Child Development

The main schemes launched by the Ministry of Women and Child Development are:

- Dhan Laxmi Scheme (2009) conditional cash transfer scheme to encourage retention of the girl in school;
- Balika Samridhi Yojana (BSY) (1997) scheme to address the problem of declining sex-ratio and gender discrimination through cash transfers at different stages.
- Integrated Child Protection Scheme (ICPS) (2009) promotes convergence of services for children in need of protection and care at all levels.
- Kishori Shakti Yojana (Adolescent Girls Scheme) (2001) focusing on improving the nutritional and health status of adolescent girls between 11-18 years of age, and promoting school attendance.
- Rajiv Gandhi Scheme for Empowerment of Adolescent Girls (SABLA) (2011) – was recently launched with the objective of promoting empowerment, better nutrition and healthy habits, including reproductive health, education and life skills.

### 2. Department of Education

Some of the schemes launched by the Department of Education are:

- Mahila Samakhya (Education for Women's Equality) (1989) — scheme which promotes residential and bridge schools for girls called Mahila Shikshan Kendra.
- Sarva Shiksha Abhiyan – SSA (Education for All) (2010) programme which aims to universalise elementary education for all children in the six to fourteen age group through community-ownership of the school system.
- National Programme for Education of Girls at Elementary level (2003) - a component of the SSA which provides additional support for education of underprivileged/disadvantaged girls at elementary level beyond the normal SSA interventions.
- Kasturba Gandhi Balika Vidyalaya (KGBV) (2007) a component SSA for setting up residential schools at upper primary level for girls belonging predominantly to the Scheduled Castes, Scheduled Tribes and Other Backwards Castes and minorities in difficult areas.

### 3. National Commission for Women

The National Commission for Women launched the Bal Vivah Virodh Abhiyan (Child Marriage Protest Programme) in 2005. It was a nationwide awareness-raising programme against child marriage.

The Central Government has also established mechanisms for public recognition of positive role models, such as the National Bravery Award for Indian Children of Indian Council for Child Welfare in place since 1957, to children who performed outstanding deeds of bravery and selfless sacrifice. Several children have been awarded this prize for their actions against child marriage.



Some State Governments also have incentive programmes for girls in place since the 1990s, such as the Rajasthan Raj Lakshmi Scheme launched in 1992, and Haryana's Apni Beti, Apna Dhan–ABAD scheme (My Daughter, My Pride) initiated in 1994. After 2000, additional state governments have put in place conditional cash transfer schemes for girls, such as Delhi, Haryana (2005) and Madhya Pradesh (2006), and Karnataka's Bhagyalaxmi Scheme (2004).



## 8.5 IMPORTANCE OF SSA IN GIRL'S EDUCATION

Sarva Shiksha Abhiyan (SSA) is a giant step in the journey of achieving long cherished dream of universalization of elementary education. Its sole aim is quality basic education. The SSA programme is an endeavour to provide opportunities to all children for improving their human capabilities, through provision of community-owned quality education in a mission mode.

Features of SSA:

- SSA is designed with set time frame for achieving universalization of elementary education.
- It is to satisfy the demand for quality basic education all over the country.
- It is an attempt to provide opportunity for promoting social justice through basic education.
- Inclusion of local polity and community support organizations viz. panchayati raj institutions, school management committees, village and urban slum level education committees, parents in order to spread the range of the programme
- A different approach towards spreading awareness through teachers' associations, mother teacher associations, tribal autonomous councils and other grassroots level structures in the management of elementary schools.
- A syndicate effort between the central, state and the local government
- An opportunity for States to develop their own vision of elementary education

### Schemes under SSA for girls

### 1. National Programme for Education of Girls at Elementary Level

The government has approved a new programme called the National Programme for Education of Girls at Elementary Level' as a revision to the scheme of Sarva Shiksha Abhiyan for providing additional components for education of girls at elementary level.

NPEGEL is an integral part of SSA and is being realized under the aegis of SSA, but with a separate identity and pace.

NPEGEL has been designed for education of underprivileged/disadvantaged girls from Class I to Class VIII as a distinct gender constituent plan of SSA. It was necessary to add on a gender component in order to achieve UEE for girls in educationally backward areas.

NOTES

The scheme is applicable in the following areas:

- Educationally backward blocks, where rural female literacy is less than the national average (46.13%, Census 2001) and the gender gap is above the national average (21.59%, Census 2001).
- Blocks or districts having at least 5 per cent SC/ST population and SC/ST female literacy rate below 10 per cent shall also be taken up under this programme.
- Selected urban slums.

### 2. Kasturba Gandhi Balika Vidyalayas (KGBVs)

The Kasturba Gandhi Balika Vidyalayas (KGBVs) scheme was commenced by the Government of India in August 2004 for establishing residential schools at upper primary level for girls belonging primarily to the SC, ST, OBC and minorities in area with difficult geographical conditions.

The scheme of the KGBV was running as a separate scheme but in synchronization with the SSA, NPEGEL and Mahila Samkhya (MS) for the first two years but on 1st April 2007 it was fused with the SSA programme as a separate component of that programme.

The scheme is applicable in educationally backward masses having following criteria:

- Intensity of tribal population with low female literacy (below national average) and/or a large number of girls out of school.
- Concentration of SC, OBC and minority populations with low female literacy (below national average) and/or a large number of girls out of school.
- Areas with low female literacy (below national average).
- Areas with a large number of small and scattered habitations that do not qualify for a school.

### 3. Scheme for Strengthening of Boarding and Hostel Facilities for Girl Students

A central government funded scheme titled Scheme for Strengthening of Boarding and Hostel facilities for Girl Students of Secondary and Higher Secondary Schools had been employed up to 2004-05. The scheme was commenced in 1993-94 with the basic objective to address the problem of access to secondary schools for girl students. The scheme as modified w.e.f. 16.8.2001 provides for grant of ₹10,000/- per annum per girl boarder and one-time non-recurring grant of ₹3,000/- per boarder to voluntary organizations for running hostels for girl students of secondary and higher secondary schools. Students from classes VI to XII were eligible for assistance under the scheme and a maximum of 150 boarders were assisted in a single hostel.

The scheme was formulated and employed keeping in view the huge chronological insufficiency in girls' education and the clear inequality between boys' and girls' education at secondary level. It was considered vital to provide access to girls to secondary schools in such a way that they are not required to cover large distance. The scheme to provide financial assistance to NGOs to run girls' hostels close to the schools was launched with this objective in view.

**Check Your Progress**

4. What is the aim of the Balika Samridhi Yojna?
5. Name any one scheme started for girls under SSA.



## 8.6 SUMMARY



NOTES

In this unit, you have learnt that:

- Systematic efforts have been made to promote educational research in India after independence. Further, various attempts have been made in the past to document the trends in educational research. Prominent among them are the five Surveys of Research in Education (Buch, 1974, 1979, 1987, 1991; NCERT, 1997).
- Researchers are now focusing more in subject-specific educational domains and on socially-relevant issues such as the education of the disadvantaged, women's education, and so forth. Due to increasing stress and early burnout, there is also a trend of incorporating variables of positive psychology viz. personal well-being, psycho-neural well-being, spirituality, emotional intelligence, self-esteem etc.
- Since 1950, it has been a constitutional commitment to provide free and compulsory elementary education to all children up to the age of fourteen years. That meant that by 1960 all children should have been enrolled in schools. But as far as the available the educational facilities of that's time the target was way too over ambitious. Hence for obvious reasons, the target date was altered a number of times.
- The dropout rates are much higher for educationally backward states and districts. Girls in India tend to have higher dropout rates than boys. Similarly, children belonging to the socially disadvantaged groups like scheduled castes and scheduled tribes have the higher dropout rates in comparison to general population.
- A number of policies, plans, laws and programmes have been framed in the country with the basic objective of tackling the problem of the rapidly increasing child labour. The articulation of a new National Child Labour Policy, the portrayal of the Child Labour (Prohibition and Regulation) Act 1986, the establishment of a task force on child labour, the acceptance of the Convention on the Rights of the Child and so on are some of the efforts of this process.
- The harmful consequences of child marriage are segregation from family and friends, limiting the child's interactions with the community and peers, lack of opportunities for education.
- For both girls and boys, early marriage is damaging to physical, intellectual, psychological and emotional abilities and also cuts off all the educational opportunities and chances of personal growth.
- There are many factors which are responsible to support the continuation of the practice of child marriage in India. Poverty and social norms meant to ensure family honour and protect girls are significant factors that increase the risks for a girl to be married while still a child.
- In addition to the national legal and policies to eliminate child marriage, the central and state governments have many initiatives in place to address child marriage indirectly by focusing on the development of the girl child and promoting girls' education.

- Sarva Shiksha Abhiyan is giant step in the journey of achieving long cherished dream of universalization of elementary education. Its sole aim is quality basic education. The SSA programme is an endeavour to provide opportunities to all children for improving their human capabilities, through provision of community-owned quality education in a mission mode.

## 8.7 KEY TERMS

- **Educational research:** Refers to a variety of methods, in which individuals evaluate different aspects of education including: 'student learning, teaching methods, teacher training and classroom dynamics'.
- **Dropout:** Means leaving a school or group for practical reasons, necessities, or disillusionment with the system from which the individual in question leaves.
- **Child labour:** Can be defined as work/labour that snatches childhood from children, their potential talents and their dignity, and that is damaging to their physical and mental development. It refers to work that hampers their education by depriving them of the opportunity to join school, making them drop out from school or to combine school with excessive burden of work.
- **Sarva Shiksha Abhiyan:** Refers to the programme which aims to achieve universalization of elementary education. Its sole aim is quality basic education. The SSA programme is an endeavour to provide opportunities to all children for improving their human capabilities, through provision of community-owned quality education in a mission mode.

## 8.8 ANSWERS TO 'CHECK YOUR PROGRESS'

1. Researchers are now focusing more in subject-specific educational domains and on socially-relevant issues such as the education of the disadvantaged, women's education, and so forth.
2. Dropout is an unbroken phenomenon of Indian education system, extending over all levels of education, in all parts of the country and across all the socio-economic groups of the population. It refers to a situation where a student leaves the educational institution in the middle of a semester, due to practical reasons, such as lack of money, illness or other similar factors.
3. UNICEF defines child marriage as marriage before eighteen years of age and considers this practice a violation of human rights.
4. Balika Samridhi Yojana (BSY) (1997) scheme aims to address the problem of declining sex-ratio and gender discrimination through cash transfers at different stages.
5. The government has approved a new programme called the National Programme for Education of Girls at Elementary Level as a revision to the scheme of Sarva Shiksha Abhiyan for providing additional components for education of girls at elementary level.

## 8.9 QUESTIONS AND EXERCISES

### Short-Answer Questions

1. List the reasons that lead to the phenomenon of dropout.
2. Write a note on the phenomenon of child marriage in India.
3. List the main points of the Prohibition of Child Marriage Act, 2006.
4. What are the features of SSA?

### Long-Answer Questions

1. Explain the five surveys of education and what they included.
2. Which are the areas that lack research based perspective in India?
3. Which are the various policies that have been enforced to prevent child labour?
4. Name and describe some of the schemes started under SSA.

## 8.10 FURTHER READING

Bhatt, B.D. and Sharma, S.R.; *Women's Education and Social Development*, Kanishka Publishing House, New Delhi, 1992.

Rao, U.; *Women in Developing Society*, Astigha Publishing House, New Delhi, 1985.

Singh, U.K. and Nayak, A.K.; *Women's Education*, Commonwealth Publishing, New York, 1997.