

Introduction to Environmental Awareness

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Abstract: *Environment refers to the sum total of condition and influence that affects the life and development of organism. The qualitative development and quantitative progress of mankind depends on the quality of environment. Therefore, there are no two views about the fact that, it is the primary responsibility of man not only to preserve the environment but also to improve it qualitatively.*

1.1 INTRODUCTION

Environment is the sum total of an aggregate of all the external conditions forces and circumstances, objects, or influences that act upon an organism which live by changing energy and matter with their environment with changing nature of human being environment is not static. It changes with corresponding change in time and conditions. It is varied in form and physical environment, biological, Ecological (Edaphic, diametric, Abiotic Biotic, Human or Social) Physical and Biological Nature and Man made like Physical, Biological, social, Economics, Geography, Psychology, Education, Religious, Cultural and Political etc.

If we look back in the age of “**Puranas**” we will find that the education was delivered to students at the residence of **GURU**. Guru’s residence or ‘**ASHARAM**’ was located in a peaceful atmosphere because education is more effective in a good atmosphere Environment is a multi dimensional system of complex interrelationship in a continuing state of change. The environment of an individual comprises the entire physical and social factor around him, which directly affect his living including the working conditions. The various environmental factors are interdependent and inter woven with each other. The Physical environment includes the living and Non living, the geographical landmark, topography and climatic conditions, the manmade features like Buildings, Bridges, Roads, Transports & other Features like health, sanitations, nutrition aspects.

Environment is the sum of the substance and forces externals to the organism in such way that it affects the organism existence. In relation to man, the environment constitutes of air, land, water flora and fauna because these regulates the man’s life.

1.2 WHAT IS ENVIRONMENT?

The meaning of the word “**Environment**” is a surrounding, external conditions influencing development or growth of people, animals or plants; living or working conditions etc. This involves three questions:-

What is surrounded?

By what Surrounded?

And where Surrounded?

Decidedly the answer to the first question is living object in general and man in particular. If man is taken to be surrounded, Physical attributes become the answer to the second question which become environment and where surrounded is the space or habitat? Primarily, the concern of all educationists is with the environment of man. But man can not exist or be understood in isolation from the other forms of life and from plant life and so environment of all biological population should be the concern of teacher.

Environment refers to the sum total of conditions which surround man at a given point in space and time. In the beginning the environment of early man consisted of only physical aspects of the planet earth (land, air and water) and biological communities but with the march of time and advancement of society man extended his environment through his social, economical and political functions.

1.3 DEFINITION OF ENVIRONMENT

Environment consists of the sum total of the stimulation that the individual receives from conception until death. It covers all those circumstances which assert their influences on the individual since conception to death.

Some important definitions of environment are as under:

According to Douglass and Holland ---

"The term environment is used to describe, in the aggregate, all the external forces, influences and conditions, which affects the life, nature, behaviour and the growth, development and maturity of living organisms."¹

ACCORDING TO BORING

"A person's environment consists of the sum total of the stimulation which he receives from his conception until his death"².

ACCORDING TO A.G. TANSLEY

"The Environment is everything that affects the individual expects his genes".³

1. H.S. Sharma & S.K. Jain—Teaching of Environmental Science (2008) Page No.1

2. Dr Singh & Dr. Sindhu—Environmental Studies (2007) Page No.1

3. Dr. P. Sharma—Environmental Education (1998) Page No.18

International Encyclopedia of Social Science

"Environment is the aggregate of all the external conditions and influences affecting the life and development of an organism".¹

1.4 TYPES OF ENVIRONMENT

Environment has classified into mainly two types:-

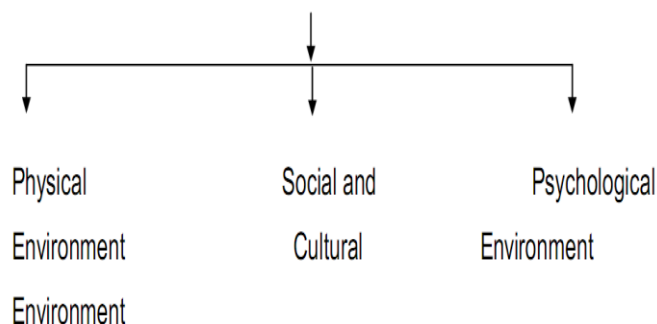
1. Natural Environment
2. Man Made Environment

Natural Environment is that which comes upon automatically and constituents of river, sun, seas, moon, sky wind, rain, flower etc.

Man made Environment is that which is made by man for e.g.-Social environment, cultural environment, Psychological, religious, Economical etc.

Kurt Lewin has enumerated three types of environment which influence the personality of an individual.

Environment



1. PHYSICAL ENVIRONMENT

It refers to geographical climate and weather or Physical conditions in which an Individual lives. The human races are greatly influenced by the Climate. The white, black and yellow races are due to the Climate

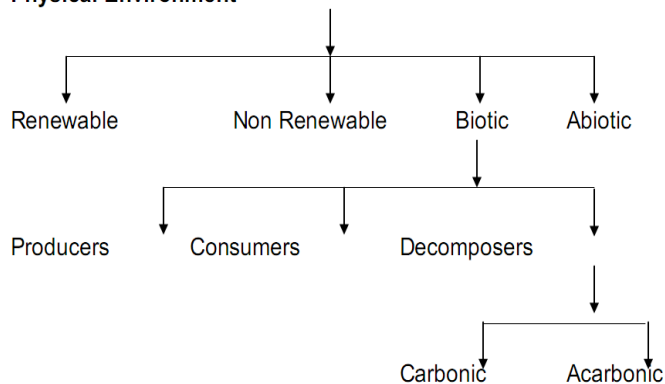
1. Dr.R.A.Sharma-Environmental Education Page No.2

Conditions. The Physique of an individual depends on the Climate conditions. Even heredity is also influenced by the physical environment.

Another way physical Environment is to classify it as:

- a. Renewable and Non-Renewable
- b. Biotic and Abiotic

Physical Environment



(a) Renewable and Non-Renewable: -

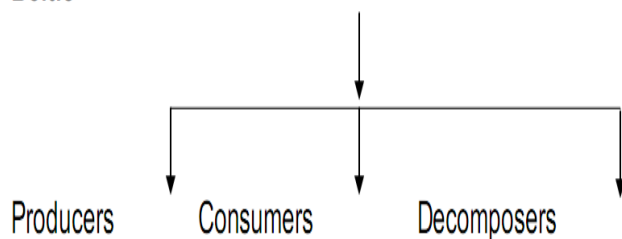
The renewable component of natural environment comprises those elements which are renewable after they are consumed. These include water, air, soil, and forests.

The Non-renewable component of natural environment comprises those elements build which take a long time build up. Although they take a long time to get consumed yet cannot be easily renewed such elements are mineral, Mountains, Petroleum etc.

(b) Biotic and Abiotic:-

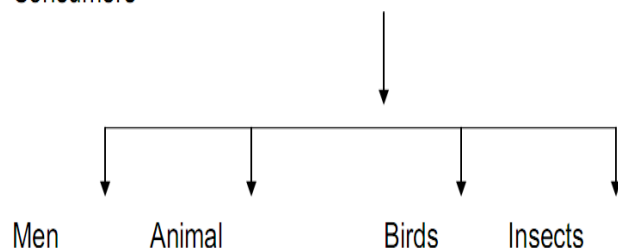
The biotic components of natural environment can be placed in three categories-

Boitic



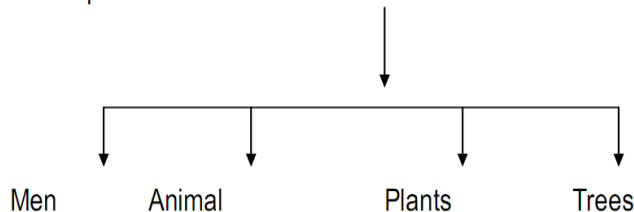
- **Producers:** - Producers are self-generators. They produce their own food and provide self-nutrition
- **Consumers:** - Consumers depend on other for their nutrition such as men, animals, birds, insects etc.

Consumers



- **Decomposers:** - Decomposers are those components which get nutrition from the decomposed dead bodies of men, animals, birds, Plants, tress, etc. The decomposed elements are returned to the soil in the form of carbonic or Acarbonic from.

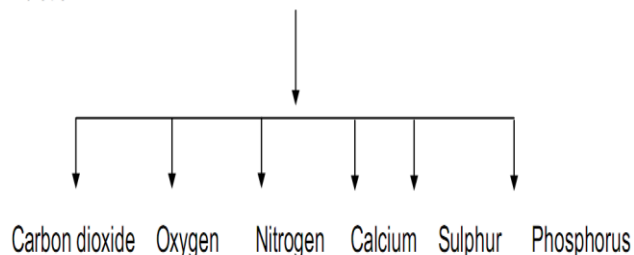
Decomposed



• Abiotic :-

The Abiotic components which are not alive. These include different natural gases such as Carbon Dioxide, Oxygen, Calcium, Sulphur, Phosphorus etc. These are received from air, soil and water.

Abiotic



2. SOCIAL ENVIRONMENT

Man is a social animal. Besides natural environment he is a part and partial of the social environment role in the growth and development of the individual social environment influence tradition, customs, folk songs and other kinds of folk dances are a part of the social environment. The society which keep influencing the individual directly or indirectly. These units are family, Schools, state, national and international organizations, state and central offices, political, organization and so on.

3. CULTURAL ENVIRONMENT

Cultural environment is influence people like veda, law, Social restrictions beliefs, religious etc are influence the way of life.

4. PSYCHOLOGICAL ENVIRONMENT

Psychological is a vital living and existing subject. Its study is very essential for people to function as behavioural Scientists, Behaviour and introduction to comparative Psychology. Psychological environment influence the personality, adjustment, Motivation, Human growth and development

5. ECONOMICS ENVIRONMENT

Economic is related to two basic phenomena i.e. wants of man and resource of man. The land past profession and labour are the two components of economic environment.

6. POLITICAL ENVIRONMENT

Political Environment is equal opportunity to all irrespective of cast, creed, Colour, sex and origin. Certain Fundamental rights like right to think, speak, discuss and

work etc. People choose his leader by direct election and sent state and central government. The political environment influence law equality, right, Judiciary executive.

7. RELIGIOUS ENVIRONMENT

India is a multi-religious country Hinduism, Islam, Christianity, Sikhism, and other religious life here.

1.5. Meaning of Environmental Education

Environment education can be defined as a process of learning between existing situation through which sufficient knowledge can be gained to understand environmental problems and contributes towards solving them. Environmental education does not stop with acquiring information about environment but also help to acquire attitude and value conducive to environmental protection and understanding of independence of nature and people.

Environmental education is the education through environment, about environment and for environment. Environmental education helps in programming, learning experiences from simple to complex. For illustration children look at a bird observe the watch it flying etc. Environmental education helps children to proceed from indefinite ideas to definite ones. It also helps the children to proceed from concrete to abstracts, helps the ordering of learning experiences from the empirical to rational.

Environmental education is a way of implementing the goals of environmental protection. Environmental education is not a separate branch of science or subject of study. It should be carried out according to the principle of life integral education.

Environmental education teaches peoples that natural environment and manmade Environment are profoundly interdependent and links the acts of today to the consequences tomorrow. It demonstrates the economics, Political and ecological interdependencies among national communities and the need for solidarity among mankind.

Environmental education provides the foundation for a new international order, which will guarantee the conservation and improvement of environment.

Environmental Education is the life long process of recognizing values and clarifying concepts in order to develop skill and attitude necessary to understand and appreciate the interrelatedness among man, his cultural and his Bio-physical surroundings. It also entails practice in decision making and self formulation of code of behavior about issues concerning environmental quality

and quality of life now and in future as well Environ-mental education provides :-

- (A) A Comprehensive knowledge with working of nature and environment.
- (B) An experience in valuing environment quality.
- (C) An understanding of the impact of personal choices of actions on environmental quality.
- (D) A source of guidance to the people to act as more responsible citizens with an increased civic sense.

1.6 Definition of Environmental Education:

❖ **The finnish National Commission in a seminar held in 1974 has said:**

“Environmental education is a way of implementing the goals of environmental protection. Environmental Education is not a separate branch of science or subject of study. It should be carried out according to the principle of life long integral education”

❖ **According to Mishra (1993)**

“Environmental education appears to be a process that equips human being awareness, knowledge, skills, attitudes and commitment to improve environment”.

❖ **According to R.A. Sharma (1996)**

“Environmental education refers to the awareness of physical and cultural environment and perceive its relevance for real life situation. The problems and issues are to be identified. The imbalances of environment are to be improved in view of Sustainable development”.

❖ **According to Cook and Heorn (1971) :**

“Environmental education is problem centered interdisciplinary, value oriented, community oriented and concerns with man’s survival as species based on student initiated activities and involvement present and future oriented”.

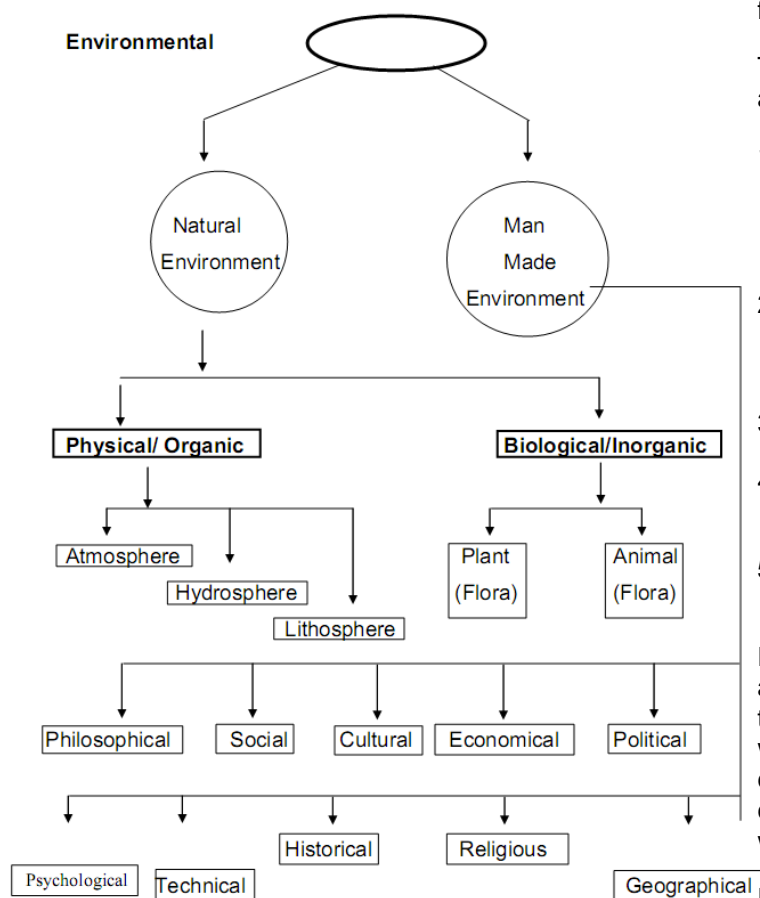
❖ **According to D. Bandhu (1981) :**

“Environmental education is the process of recognizing values and clarifying concepts in order to develop skills and attitude necessary to understand and appreciate the inter-relation among man and his Bio-physical surrounding environmental education also entails practice in decision making and self formulating a code of behaviour about

issues concerning environmental quality”.

The environmental education aims at developing in the child awareness and understanding of the physical and social environment in its totality. Environmental studies involve a child's investigation and systemic exploration of his own natural and social environment and prepare himself to solve the problems for improving his life.

1.7 CONSTITUENTS OF ENVIRONMENTAL EDUCATION:



1.8 OBJECTIVES OF ENVIRONMENTAL EDUCATION

Kothari Commission (1966) Recommended

“Environmental activities will lead to study of Natural science, Physical science, Geographical Science, History and Civics, Construction and Creative skills will provide the basis for the practice of healthy living will serve as the fundamental for environmental education”.

The Environmental Education aims at developing awareness and understanding the physical and social environment in the child in it's totally. 'Environmental Education' has been introduced in the Curriculum from on early stage in India.

Several Government and Non-government organization educate people and create awareness of environment. A development of Environment has been setup in 1982 on Environmental information system. There is a centre for Environmental Education (CEE) at Ahmedabad. There are one more than two hundred private organization working for environmental Education.

The Main objectives of Environmental Education in India are as follows:-

1. To create an atmosphere in the schools and classroom so that student can participate in problem solving and decision making plan and procedure.
2. To develop the capabilities to evaluate the effectiveness and work ability of development programmes.
3. To improve the quality of environment.
4. To develop an awareness among students an environmental problems and conservation.
5. To develop attitude for identifying and solving environmental problems.

Environmental education is a process aimed at developing a world population that is aware of and concerned about the total environmental and its associated problem and which has the knowledge, attitudes, motivations, commitments and skills to work individually and collectively towards the solution of current problems as well as the prevention of new ones.

Following objectives of environmental education have been formulated for both formal and non formal education at all level at the international conference of **UNESCO (1977)** level at Tbilisi.

- (1) To develop an ability for evaluating environmental components and educational programmes in terms of ecological, economic, social, cultural, aesthetic and educational factors.
- (2) To help in acquiring knowledge and variety of experience of environment and associated problems.
- (3) To develop an awareness of environment and

sensitivity to the total the environment and its allied problems.

- (4) To help in acquiring skills for identifying and solving environment problems.
- (5) To develop a basic understating of structure process and problems of environment and interdependence of environmental components.
- (6) To develop attitudes a set of vahies and feeling of concern for the environment and encouragement or motivation for active participation protection and improvement of environment.
- (7) To provide an opportunity for an active participation or practice at all levels in working for the solution of environment problems.

The above activities are related to all levels in both formal and non formal system of education.

1.9 NEED OF ENVIRONMENTAL EDUCATION

The goal of environmental education is to improve all ecological relationships including the relationship of humanity with nature and people with their surrounding. Thus it may include conservation of energy and soil, protection of Air, water and atmosphere from pollution, effective utilization of locally available resources creation of conductive atmosphere for living through social and civic consciousness and harnessing natural resources without any ecological imbalance.

The future of any country is inextricably linked with its educational system. In this direction, environmental education has been rightly and justly conceived a leading educational innovation. So Environmental Education should be not an '**option**' and it should be a '**must**'.

It is needed for the following reasons.

1. Environmental Education is the process of recognizing values clarifying concepts in order to develop skills and attitude necessary to understand and appreciate the interrelatedness of man his culture and Bio-Physical surrounding.
2. It also entails practice to decision making and self formulation of a code of behaviour about issues cocening environmental quality.
3. To create a consciousness of environment.
4. To equip children with better knowledge, attitudes, values and skills to face the world around us and to adjust to the changing social conditions.

5. To save the present generation from danger.
6. To maintain a balance in the ecology.
7. Environmental education help learner to find out the symptoms and the real causes of environmental disorder & Pollution.
8. Environmental Education develops cognitive affects among students.
9. Environmental education helps in quality and awareness among the students.
10. Environmental education helps to observing the natural beauty and monuments.
11. Environmental Education helps learning experience form simple to complex.
12. Environmental Education develops the habit of self Instructions and discovery the thing for themselves.
13. Environmental Education helps the ordering learning Experience from the empirical to the rational.
14. Environmental Education encouraged to conduct their own Investigation and draw their own conclusions

1.10 ENVIRONMENT AND HUMAN HEALTH

The survival, well being and productivity of human beings are very closely linked with the environmental factors. The definition of health itself as per the **World Health Organization**:

"State of complete physical, mental and social well being and not merely the absence of disease and infirmity."

Environment can be both a cause as well as cure of many diseases. While fresh Air, Pure water, and mother earth are the nature given positive health Environmental factors. We have on the other and home man made disease producing environmental factors such as smoke and gift, polluting the air we breathe. Toxic waste products contaminate the water we drink and the earth in turn gives us toxic vegetables and fruits that we eat. The factories and thermal power plants which on the one hand give us electricity and numerous articles for our living comforts also give us smoke for atmospheric pollution and poisons for water and land pollution. Lung diseases like chronic, bronchitis, emphysema and chronic corpulmonale are the result of air pollution, while water and land pollution is responsible for several gastro intestinal and liver diseases.

Industrial and vehicular noise pollution cause may hearing and cognitive disorders. Health care thus is not the domain of health departments only but should involve the active participation of people at individual level.

In the context of health and diseases, Environment may be divided under two heads:-

1. External Environment and
2. Internal Environment.

Factor like air, water, earth and its products, various food articles that we eat and friends and foes that we have around us comprise the external environment. The blood with its various components that circulates in our body, hormones, our emotions the states of our mind constitute what we call as internal environment. There is close association and interdependence between the internal and external environment. Many diseases are not so much due to the gift of genes but as a result of imbalances in the internal and external environments. Diseases like high blood pressure (primary hypertension); heart attacks (coronary or ischemic heart diseases), over-weight (obesity) certain abdominal diseases like peptic ulcer and irritable bowel syndrome are some of those problems which are largely as a result of faulty environment, partly external and partly internal. Incidence of diabetes mellitus hypertension and coronary heart disease has been found to be higher in certain populations after they have moved out to newer surroundings thereby once again pointing out to the powerful influence of environment on disease patterns. Higher occurrences of diabetes and coronary heart disease among Indians in UK and of hypertension among migrants in USA are some of the examples of the effect of environment on health and disease.

The internal environment probably has a stronger role to play in the causation of diseases related to heart in which behaviour plays an important role.

Nearly 80% of the world's diseases, particularly in developing world can be linked with water in our country there are 14 river systems. About 50 to 70% of pollution load in our river system is due to human wastes (faecal matter). For instance during Kumbh Mela, coli form increases from 300/100 ml to about 165,000/100 ml. This infection persists for 30% to 50 km downstream. In our country Kerala has much lower mortality rates than even the national average. The reason is high literacy rate among women and better environmental sanitation.

Different types of diarrheas, malaria, dengue and filaria are disastrous. There is said to be some correlation between these diseases and spread of irrigation water and pesticides. Thus these are the negative impacts of modern

agriculture. These have been increase in pesticides resistance among pathogens, water logging, and salinity. These conditions are favorable to spread of water borne diseases.

The following strategy emerges from the above account

- (1) Future impact assessment of all development projects must include health aspects as well.
- (2) Habitat management is very vital.
- (3) Disease control should not be taken in isolation. There should be cooperation of doctors, health educators, social anthropologists, media men, engineers and others.
- (4) Health care should not be biased toward cities. There should be proper care in village also.

The Citizen's Report of 1982 lists the following six conclusions regarding the state of environmental health of India.

- (1) "Double burden" of disease i.e. old disease continue and new, are making rapid strides
- (2) Even, third dying person is a child below 5 years of age. This is due to poverty, malnutrition, and insanitary environment and unclean drinking water.
- (3) Diarrhea attack particularly children, killing 1.5 million every year.
- (4) Extension of irrigation helped breeding of mosquitoes which spread filariasis, malaria and dengue.
- (5) Due to improper conditions sewage seeps from pipes which are causing hepatitis.
- (6) Increase use of cigarettes and bidis and pesticides has caused more diseases.

Environment plays an important role in preventing disease and preserving and maintaining positive health. It is a well known fact that many of the modern diseases like diabetes, hypertension and coronary heart disease are less prevalent in rural population than in urban dwellers. It is seen that when persons people, migrate from villages to cities or from one country to another, they tend to show higher incidence of these diseases, after a short stay. Thus both external and internal environment change the internal environment to a large extent depends upon the external environmental factors being peaceful or hostile.

The clean unpolluted air away from the chimneys and heavy vehicular traffic of industrial townships, or even in the large cities, the morning fresh air free of fumes and

smoke has a great cleansing and purifying effect on the lungs and the body as a whole. Health and longevity of populations residing in mountainous areas is in general better than those living in the Planes. This is again attributed to unpolluted air and clean drinking water.

Environment thus has an important dual role in health viz., in causation and cure of disease and in preserving and maintaining positive health. It is not only the physicians but the other strata of society as well as has to play an equally important role in controlling and using the environment for preservation of health and avoidance of disease.

1.11 ENVIRONMENTAL AWARENESS

Environmental Awareness means knowledge and understanding of facts and concepts relating to environmental problem like – pollution, population explosion, deforestation, Energy crises Ecological disbalance etc. The terms environmental education and Environmental Awareness are used interchangeably for the same meaning but there is significant difference in those two terms. The study of physical and Bio-Sciences, Geography, Agricultural provides the environmental awareness. But the environmental awareness does not help to developing skills and attitudes for improving environment. Therefore it is essential to understand the concept of environmental awareness and differentiate it with educational environment.

Environmental Awareness may be defined as the social groups and individuals to gain a variety of experiences in and acquire a basic understanding of environment and its associated problems. World repeatedly pointed out that any solution to the environmental crises will require environmental awareness and understanding to be deeply rooted in the educational system at all levels.

At the Belgrade International workshop (1975) working documents were provided by the trend papers that described the state of the art of environmental education in all parts of the world and provisions to extend and explore the environment. Environmental Awareness may provide power and understanding:

- To recognize the interdependent among material into physical environment, plant and animal life for survival, growth and development.
- To identify human, material, space and time resources in the environment.
- To recognize way of making effective use of environmental resources for social, economic and cultural survival, growth and development.

- To take decisions individually and collectively and initiate actions for conservation of nature and natural resources, to recognize the special significance of conservation of natural resources and initiate or support community efforts for the purpose.

The United Nation Conference of Human Environment (Stockholm, June 1971) was a major event for those concerned with the quality of the world's environment. One of the recommendations of the conference resulted in the creation of United Nations Environmental Programme (**UNEP**) while other recommendation specially constituted the foundation of frame work for co-operation effort in Internationally which states that Environmental Awareness may be developed by-

- Identifying, analyzing and understanding the needs and problems of personal life including health, vocation etc.
- Social life at different level viz. family, caste, community, religion, town or village life, state and country.
- National life including civic, economic etc.

Environmental Awareness may also be developed when we-

- Appropriate, promote and use the environment to improve health, vocation and Social & National Life.
- Interact with government and social agencies and utilize the developmental facilities provided by these agencies in his/her individual capacity and also for organizing creation community activities.
- Develop and aesthetic sense to appreciate beauty and adopt it in personal and social life.

Environmental Awareness provides the understanding and competence to recognize environmental resources and interdependence between physical and biological components of the environment for the growth and development. "**Environment Awareness**" is inter-relation and life. Several seminar and conferences have been organized at national and international level on "environment." Most of the experts and scientists of different disciplines have realized the importance of "**Environment Awareness.**"

The Awareness confines to cognitive levels where as educational environment includes cognitive psychomotor and affective levels.

In order to help students grow in knowledge, skills and values, attitudes and awareness relevant to environments teacher is expected to be not only dispenser of information and knowledge, but also managers to teaching learning situations. The environment and the experiences of the children out side the school, vary from place to place consequently the activities provided them in the school by teachers would also vary so that knowledge, attitude, skill and commitment can be built on the solid foundation of experiences the child draws from the environment.

The teacher can enjoy greater action by in organizing such experiences by providing the chances to explore their activities in regard with environment through plantation, through forest conservation etc.

Teacher should also suggest the students to see T.V. programmes to read Newspapers and the hear the Radio News to regard with environment. He should show environmental teaching aids such as charts, models, or environment in which it is bitterly going to be polluted and damaged.

1.12 IMPORTANCE OF ENVIRONMENTAL EDUCATION IN PRESENT CONTEXT

The environmental education enlightens us about the importance of protection and conservation of our indiscriminate release of pollutants into the environment. Man has long effected his local environment but it is in the 20th century only, particularly in the fast 50 years that the scope of his influence has expanded to a global state today we affect earth systems, significantly extracting materials, using energy and emitting pollution in our quest to provide food, shelter, and a host of other exploitation of Natural resources and pollution of environment are corroding the vital life support system on which all life depends for its substance.

The importance of Environmental Education lies in producing an active environment oriented citizen; 'Active' explicates the personal involvement in interaction with the environment.

The positive attitude and values bearing responsibilities in using and managing the environmental resources are highly contingent upon the individuals self awareness of environmental problems. The environmental education is not caught rather, taught. It can be broadened and accelerated through innumerable education programmes and projects related to environmental education.

At present a great number of environmental issues have grown in size and complexity day by day, threatening the survival of mankind on earth. We study about these besides possible and effective suggestions in the

Environmental Education.

Environmental education has become significant for the following reasons:

1. **Environmental Issues Being Of International Importance**:-It has been well recognized that environmental issues like global warming and ozone depletion, acid rain, marine pollution and biodiversity are not merely national issues but are global issues and hence must be tackled with international efforts and cooperation .
2. **Problems Cropped In The Wake Of Development**:-Development in its wake gave birth to Urbanization, industrial growth, transportation systems, agriculture and housing etc. However, it has become clear that it is obligatory upon as to stop imitating practices that are already being phased out in the developed world. The north, to cleanse their own environment nave, factually, managed to move 'dirty' factories to South. When the West developed, it did so perhaps in ignorance of the environmental impact of its activities. Evidently such a path is neither practicable nor desirable, even if that is followed by developing world.
3. **Explosive Increase in Population**:-World census reflects that one in every seven persons on this planet lives in India. Evidently with 16 per cent of the world's population only 2.4 per cent of its land area, there is a heavy pressure on the natural resources including land. Agriculture experts have recognized soil health problems like deficiency of micronutrients and organic matter, soil salinity and damage of soil structure.
4. **Need for an Alternative Solution**:-It is essential, specially for developing countries to find alternative paths to an alternative good. We need a goal as under:-
 - (1) A goal which ultimately is the true goal of development an environmentally sound and sustainable development.
 - (2) A goal common to all citizens of our earth.
 - (3) A goal distant from the developing world in the manner it is from the over-consuming wasteful societies of the "developed" world.
5. **Need To Save Humanity From Extinction**:- incumbent upon us to save the humanity from extinction, consequent to our activities constricting the

environment and depleting the biosphere, in the name of development.

6. Need for Wise Planning of Development: -Our survival and sustenance depend on our knowledge and experience, applied to the wise planning of development. Resources with drawl, processing and use of the products have all to be synchronized with the ecological cycles in any plan of development our actions should be planned ecologically for the sustenance of the environment and development.

7. Mishra's Report:-Mishra (1991) recognized four basic principles of ecology, as under:-

- (I) Holism,
- (II) Ecosystem,
- (III) Succession,
- (IV) Conservation.

Holism has been considered as the real base of ecology. In hierarchical levels at which interacting units of ecology are discussed, are as under:-

Individual<Population<Community<Ecosystem<Biosphere Mishra (1991) has recognized four basic requirements of environment management as under:-

- 1) Impact of human activities on the Environment.
- 2) Value system.
- 3) Plan and design for sustainable development.
- 4) Environmental Education.

In this way the Environment Education provides important contribution in teaching and awareness.

1.13 PLACE OF ENVIRONMENTAL EDUCATION IN SCHOOL CURRICULUM:-

Environmental Education plays very important role in School Curriculum. The environmental education at school level and undergraduate level should create Environmental Awareness. The environmental education at primary level should develop basic knowledge and skill required to solve emerging environmental problems. This reason is that's why the researcher should choose a curriculum of environmental education because we can not live with out environment. The child should be aware about environment to gain knowledge about this when the child usually in class III. They still rely upon concrete objects to facilities the logical organization of their

cognitive process. Here some certain of the curriculum of environmental education given below:

- 1) Observing plants, and shows to the children with a view of reorganization them.
- 2) Observing flower to show the children the real and different types of flower.
- 3) Observing birds and animals to show about this and to visit zoo and real places where the children gain knowledge about these animals.
- 4) Visiting historical places and monuments.
- 5) Showing films and documentary.
- 6) Visiting country side.

ENVIRONMENTAL EDUCATION SYLLABUS

Environmental Education Teacher should know, what he should teach in Environmental Education. In the following paragraphs a suggested Environmental Education Syllabus is given in UNESCO Teacher Training Series No. 4, 1983. "Environmental Education: Module for In-Service Training of Science Teacher and Supervisors for Secondary Schools." This syllabus is just an outline, the details of which can be found in this Module (pages 32-146). Also this syllabus is just suggestive, and it (wholly or partly according to the need and local conditions) can be used in teacher training-pre-service. Some of this syllabus is already covered in the need existing science textbooks at Middle (VI-VIII). Secondary (IX-X), and Senior Secondary (XI-XII) levels: and the portions of the syllabus not covered so far may be infused in the science textbooks according to the need. A portion of the syllabus has also been (or may be) covered in 'Population Education', which is also (or is to be) a part of science syllabus in school curriculum.

I. Essential Knowledge About The Environment

a) Structure and Function of an Ecosystem

- 1. Type of Ecosystem.
- 2. Habitat and ecological niche.
- 3. Concept of limiting factors.

b) Energy Flow in the Abiotic Component of the Earth Ecosystem

- 1. The earth's ultimate source of energy
- 2. Factors affecting energy flow in the earth

- ecosystem
- 3. Water cycle, its role in energy flow
- 4. Energy transformations and eventual loss
- 5. Energy from the earth's interior
- c) Energy Flow in the Biotic Component of the Earth Ecosystem**
 - 1. Photosynthesis
 - 2. Respiration
 - 3. Food chain and food web
 - 4. Tropic levels
 - 5. The ten present law.
- e) Population Dynamics**
 - 1. Earth processes, their role in nutrient flow
 - 2. Water cycles, its role in nutrient flow
 - 3. The gaseous cycles
 - a) Carbon cycle
 - b) Nitrogen cycle
 - c) Oxygen cycle
 - 4. Sedimentary cycles
 - d) Phosphorus
 - e) Sulphur
 - 5. Biological magnification
- f) Population Dynamics**
 - 1. Population density
 - 2. Natality, mortality and dispersal
 - 3. Age structure
 - 4. Population growth form
 - 5. Regulation of population size
 - 6. Natural selection and evaluation
- g) Human Intervention Natural Processes**
 - 1. Human activities that affect energy flow in the earth ecosystem.
 - a) Increased combustion and carbon dioxide production
 - b) Smog, soot and other particulate matter
 - c) Ozone
 - d) Concentration of human population, heat sink and wind flow in cities.
 - 2. Human activities that effect materials flow in the earth ecosystem.
 - a) Air Pollution
 - I. Carbon monoxide
 - II. Hydrocarbons
 - III. Oxides of Sulphur
 - IV. Oxides of nitrogen
 - V. Oxidants
 - VI. Other pollutants
 - 3. The human ecosystem
- II. Essential Knowledge About Problems of the Environment**
 - a) Four Major Dimension of Environmental problems**
 - 1. The physical, economic and social consequences of environmental problems.
 - 2. The graphical scale of environmental problems
 - 3. The time scale of environmental problems
 - 4. The socio-economic systems affected by environmental problems
 - b) Major Causes of Environmental Problems**
 - 1. Rapid population growth
 - a) Food shortage
 - b) Decreasing surface area
 - c) Water shortage
 - d) Energy crisis

e) Scarcity of the earth's material

2. New problems from science and technology

a) Medical technology

b) Agricultural technology

c) Energy technology

d) Materials substitution technology

3. Development and industrialization bring in new problems

a) Cost of development

b) Development in Developing countries

c) Increased waste production and pollution

d) Cost of pollution

4. Concentration of human population (urbanization)

a) Unemployment and poverty

b) Concentration of wastes

c) High incidence of diseases

d) Malnutrition

e) Conflicting land uses

c) Broad Based Measures Toward the Solution of Environment Problems

1. Control of population growth

a) Birth control through education

b) Persuasion

I. Family planning

II. Socio-economic measures

c) Uses of medical science

I. The pill

II. Intrauterine device

III. Abortion

IV. Sterilization

2. Using science and technology to solve environmental problems

a) Expanding and improving traditional food sources

b) Developing new and unconventional food sources

c) Treatment of malnutrition

d) Pollution abatement

I. Air pollution abatement

II. Water pollution abatement

e) Recycling

3. Planning human intervention on the natural processes.

Higher studies in environment have also been introduced at the university level including the post graduate level with environmental Science as one of the subject of studies.

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