

## Unit: VI Education for conservation of Environment.

Introduction: An environmental study is the study of nature and the facts about environment. Basically environment can be defined as "All the social, economical, physical and chemical factors that surrounds man". (or) All abiotic and biotic components around man."

### DEFINITION OF ENVIRONMENT

The term "Environment" is derived from the French word "Environ" which means to "encircle" or "surround".

The Environment Act, 1986 defines the term environment as "Environment is sum total of water, air, and land, inter-relationships among themselves and also with the human beings, other living organisms and Property." The above definition clearly indicates that environment includes all the physical and biological surroundings and their interactions.

Various other Important Definitions of Environment:

Some important definitions of environment are as under:

Definition given by Merriam-Webster: "The circumstances, objects, or conditions by which one is surrounded is called environment."

Definition given by Encyclopedia: It defines environment as "The complex of physical, chemical and biotic factors that act upon an organism or an ecological community and ultimately determine its form and survival."

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

It is clear from the above definitions that environment comprises various types of forces such as - physical, intellectual, economic, political, cultural, social, moral and emotional.

To conclude, environment is "The sum total of all the external forces, influences and conditions, which affect the life, nature, behaviour and the growth, development and maturation of living organisms."

### ENVIRONMENT CONSERVATION

Conservation is an ethic of resource use, allocation, and protection. Its primary focus is upon maintaining the health of the natural world: its, fisheries, habits, and biological diversity. Secondary focus is on materials conservation and energy conservation, which are seen as important to protect the natural world.

Environmental conservation refers to a practice of protecting the environment, on individual, organizational or governmental levels, for the benefit of the natural environment (or) humans.

"The environment is everything that isn't me?"

- Albert Einstein

"Thank God man cannot fly, and lay waste the sky as well as the earth?"

- Henry David Thoreau

"In a few decades, the relationship between the environment, resources and conflict may seem almost as obvious as the connection we see today between human rights, democracy and peace?"

- Wangari Maathai



(3)

Environmental conservation is the act of conserving or saving our natural resources through careful management. This means we can use the resources but wisely and responsibly.

Examples: Reducing your waste, saving trees, recycling, using renewable resources that don't deplete our natural resources.

Conservation is defined as judicious use to avoid wastage of materials and degradation of environment. Conservation of environment involves the conservation of the natural resources. The non-renewable resources have to be conserved as they cannot be replenished. The reserves of the resources such as fossil fuels are limited and man is heavily dependent on these resources for his day to day needs. The renewable resources too have to be judiciously used. Though they are replenished, they are subjected to a lot of pollution that renders them useless.

Example: Water is plenty on earth. However, most of it is the ocean and cannot be used as such by man. Man can only use the fresh water of the rivers that are being polluted by man. The polluted waters cannot meet man's requirements effectively and satisfactorily.

Thus, conservation of the environment includes the conservation of all the natural resources. The governments of different countries must contribute by making strict legislations to counter the activities that are not environment friendly and lead to unsustainable development.

**Definition of Boring:** "A person's environment consists of the sum total of the stimulation, which he receives from his conception until his death".

It is clear from the above definitions that environment comprises various types of forces such as- physical, intellectual, economic, political, cultural, social, moral and emotional.

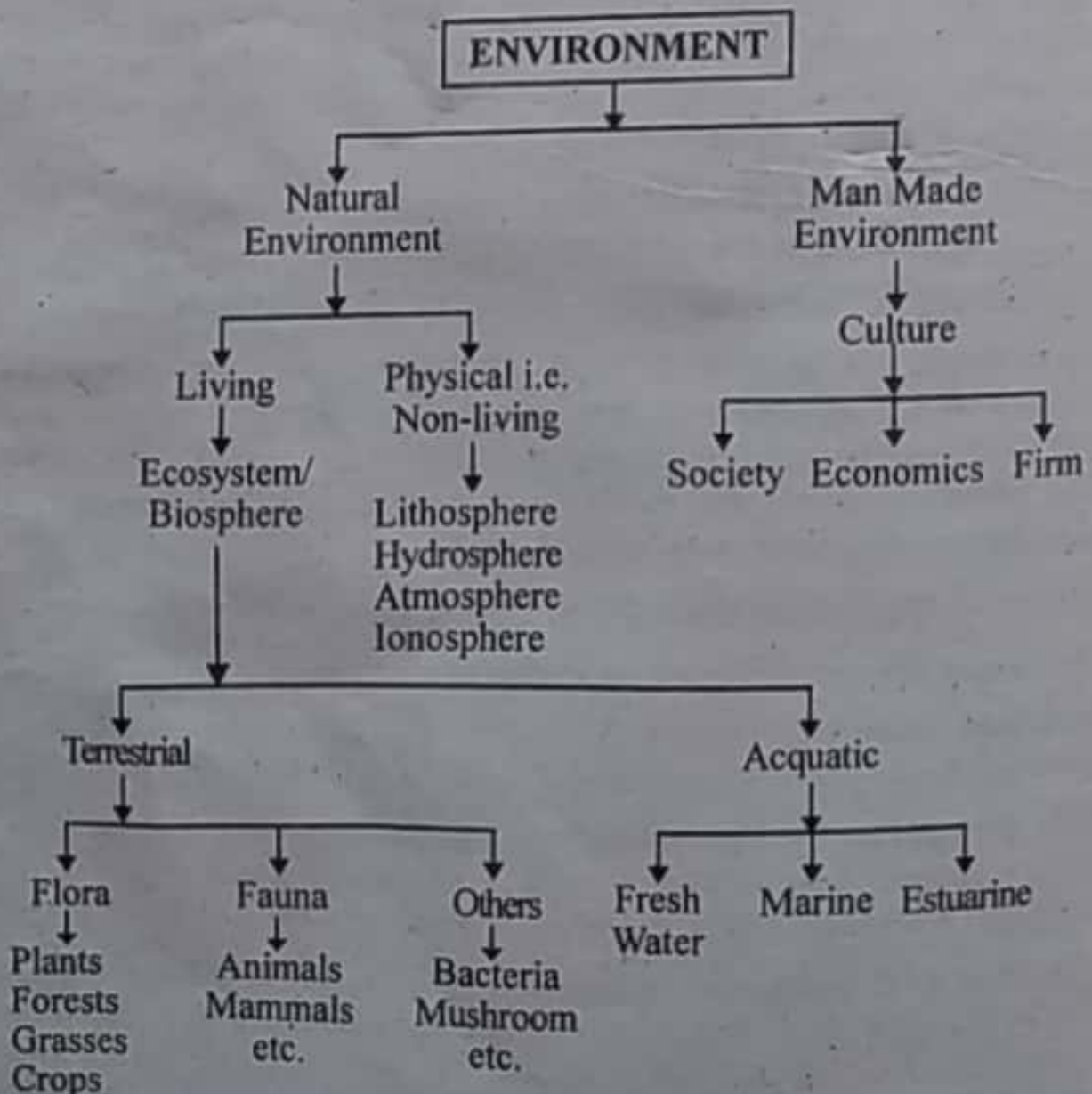
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## TYPES OF ENVIRONMENT

There are two types of environment. They are as follows:

1. Natural environment:
  - 1) Living things and biosphere.
  - 2) Non-living physical components.
2. Man made environment.

Fig. 4.1 depicts the various types of environment clearly, each of which is detailed in the subsequent pages.



## ECOSYSTEMS

An ecosystem is a biological environment consisting of all the organisms living in a particular area as well as the non-living, physical components of the environment with which the organisms interact. Such as air, soil, water and sunlight. It is all the organisms in a given area, along with the non-living (abiotic) factors with which they interact; a biological community and its physical environment.

### STRUCTURE OF AN ECOSYSTEM

The structure of an ecosystem explains the relationship between the abiotic (non-living) and the biotic (living) components.

1. Biotic Structure: The plants, animals and microorganisms present in an ecosystem form the biotic component. These organisms have different nutritional behaviour and status in the ecosystems and are accordingly known as "producers" or "consumer" based on how they get their food.

2. Abiotic structure: The physical and chemical components of an ecosystem constitute its abiotic structure. It includes climatic factors, edaphic (soil) factors, geographical factors, energy, nutrients and toxic substances.

### ECOLOGICAL BALANCE

"Earth provides enough to satisfy every man's needs, but not every man's greed."

"What we are doing to the forests of the world is but a mirror reflection of what we are doing to ourselves and to one another."

— Mahatma Gandhi



## Environment Education in school curriculum:

The National Curriculum framework [NCF] 2005 and its overall perspective of environmental education a resume and its treatment in different levels of school textbooks of different states and CBSE boards were analyzed an overall view and strategies of implementation are presented here. NCF envisages a structure that articulates required experiences and address some basic questions like

- i) what educational purpose should the schools seek to achieve?
- ii) what educational experiences in EE can be provided that help to achieve those goals.
- iii) How these educational experiences can be meaningfully organised to achieve the objectives,
- iv) How do we ensure that these educational purpose are indeed being accomplished?

### A curricular framework of environmental education:

- It envisages the place of EE in the school curriculum.
- Place of EE vis-a-vis other subjects of study
- Mode and strategy of inclusion of chapters at different levels.
- EE in terms of time and allocation of marks.
- Development of syllabi and instructional material for dissemination at different levels of school education.

The Supplement the analysis of individual and institutional contributions it was decided to organise two face-to-face national consultations on environmental Education in schools. The first consultation on the academic aspects of Environmental Education [EE] in schools was organised by NCERT on 13-14 February 2004 in New Delhi.

## Aims & Objectives of environmental education: (6)

The objectives of environmental education is to increase Public awareness about environmental issues, explore possible solutions, and to lay the foundations for a fully informed and active participation of individual in the protection of environment and the prudent and rational use of natural resources. The resolutions provide the following guiding principles for environmental education.

- The environment as a common heritage of mankind.
- The common duty of maintaining, protecting & improving the quality of environment, as a contribution to the protection of human health and safeguarding the ecological balance.
- The need for a prudent and rational utilisation of resources
- The way in which each individual can, by his own behaviour and action, contribute to the protection of environment:
- The long-term aims of environmental education are to improve management of environment and provide satisfactory solutions to environmental issues.
- Provide opportunities to acquire the knowledge, values, attitudes, commitment and skills needed to protect and improve the environment.
- Encourage pupils to examine and interpret the environment from a variety of perspectives—Physical, geographical, biological, sociological, economic, political, technological, historical, esthetic and ethical.
- Arouse pupils' awareness and curiosity about the environment and encourage active participation in resolving environmental problems.
- Environmental education is closely linked to the other cross curricular themes of other subject areas.



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

### Knowledge:

As a basis for making informed judgments about the environment people should develop knowledge and understanding of:

- ⊗ The natural processes which take place in the environment.
- ⊗ The impact of human activities on the environment.
- ⊗ The comparison between different environments both in the past and present.
- ⊗ Environmental issues such as: ① The greenhouse effect, ② Acid rain and ③ Air pollution.
- ⊗ Local, national and international legislative controls to protect and manage the environment;
- ⊗ How policies and decisions are made about the environment
- ⊗ How human life and livelihood are dependant on the environment.
- ⊗ The conflicts, which arise about environmental issues, like river water sharing.
- ⊗ How the environment has been effected owing to past decisions and actions.
- ⊗ The importance of planning and design and an aesthetic consideration.
- ⊗ The importance of effective action to protect and manage the environment.



## Skills-

Six cross-curricular skills have been identified which are necessary for environmental education.

They are

- (\*) Communication skills.
- (\*) Numerical skills.
- (\*) Study skills.
- (\*) Problem solving skills.
- (\*) Personal skills.
- (\*) Social skills & information technology skills.

## Attitudes:

Promoting positive attitudes towards the environment is essential if pupils/students are to value it and understand their role in safeguarding it for the future.

Encouraging the development of attitudes in personal qualities listed below will contribute to the process.

- ① Appreciations of care and concern for environment.
- ② Concern for other living things on earth.
- ③ Independent thought of environmental issues.
- ④ Respect for others' opinion.
- ⑤ Respect for rational argument and evidence.
- ⑥ Tolerance to face others' views.