



Environmental Communication (BAJMC- 306)

by

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Syllabus - Unit 1

Unit 1: Environment and Media

1. Environment: Definition, Scope and Importance.
2. Environment Communication: Definition, Concept and Need for Public Awareness.
3. Natural Resources: Associated Problems and Law (Forest, Water, Mineral, Food, Energy and Land Resources).
4. Role of Individual and Media in Conservation of Natural Resources.

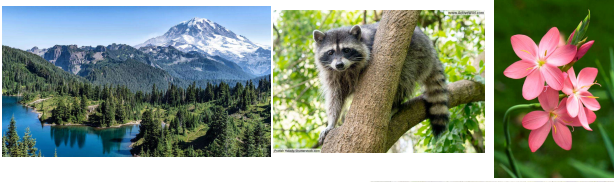


Defination of Environment

- The word **Environment** is derived from a French word "*Environ*" meaning "*encircle or surround*." Hence, everything that surrounds us is called Environment.
- Environment refers to the *aggregate influence of all social, economical, biological, physical and chemical factors* which determine the existence, growth and welfare of an organism or group of organism.
- **Environmental Studies** is the scientific study of our environment and our place in it.
- Types of Environment:
 - a) *Natural Environment*
 - b) *Anthropogenic Environment*




Natural Environment



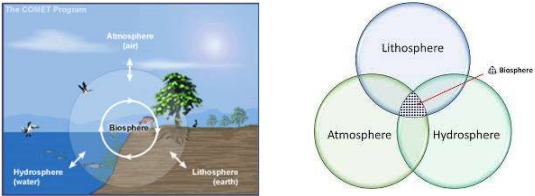
FEATURES:

1. Everything that exists in nature- *Air, Water, Soil, Land, Wildlife, Flora & Fauna, Mountains and Sunlight.*
2. Regulate our *climate.*
3. Provide basic necessities like *food, shelter* etc.
4. *Dynamic* in nature.
5. *Self-Regulating Mechanism* through counter-balance.



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Sub-divisions of Natural Environment



- **Atmosphere:** Mixture of gases that surrounds the Earth.
- **Hydrosphere:** Combined mass of water found on the Earth.
- **Lithosphere:** Rigid, Outmost rocky shell on Earth.
- **Biosphere:** Zone of life on the earth.

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Atmosphere

Definition:

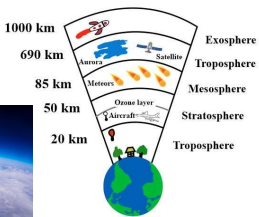

- "Atmosphere is a protective layer of gases that shelters all life on Earth, keeping temperatures within a relatively small range and blocking out harmful rays of sunlight."

Features of the Atmosphere:

- Helps retain the sun's heat and prevents it from escaping back into space.
- Protects life from harmful radiation from the sun.
- Plays a major role in Earth's water cycle.
- Helps keep the climate on Earth moderate.

Layers of the Atmosphere:

- Exosphere
- Thermosphere
- Mesosphere
- Stratosphere
- Troposphere

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Hydrosphere

What is Hydrosphere?

- The *hydrosphere* is the combined mass of water found on, under, and above the surface of the earth. This includes water in liquid and frozen forms in groundwater, oceans, lakes and streams. Approximately 75% of Earth's surface, an area of some 361 million square kilometres, is covered by ocean.

Importance of Hydrosphere:

- Human Needs (drinking, cleaning)
- Provides habitat for marine life.
- Regulates climate (maintains temperature)
- Essential component of living cells.

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Lithosphere

Definition:

- The term *lithosphere* is derived from the Greek language, composed of the words "*lithos*" meaning rocky and the word "*sphaira*" meaning sphere. It is the outermost shell of a terrestrial-type planet or natural satellite. It is composed of the crust and the portion of the upper mantle, which compose the rigid and hard outer layer of the Earth.
- The lithosphere reacts to the atmosphere, hydrosphere, and biosphere to initiate the soil-forming process called the *pedosphere*. It can extend to a depth of more than 100 km (or 60 miles) but generally has a thickness between 35 to 50 km in the continental regions.

Importance:

- The lithosphere provides our forests, grasslands and is responsible for agriculture, human settlements, and is a rich source of minerals.
- Without the movement of tectonic plates, no mountain ranges and continents would have been formed on earth.

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Biosphere

What is Biosphere?

- The *biosphere* is defined as the region on, above, and below the Earth's surface where life exists.
- It is a narrow zone on the surface of the earth where soil, water, and air combine to sustain life. Life can only occur in this zone from fungi, bacteria to large animals.
- The biosphere is a large-scale ecosystem made up of living things (*biotic*) and the non-living (*abiotic*) elements that sustain them.

Importance of Biosphere:

- Promotes life on Earth
- Provides food and raw materials
- Recycle Nutrients (oxygen, nitrogen)

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Anthropogenic Environment



FEATURES:

- Anthropogenic means 'changes in environment caused by people'. Thus, Anthropogenic environment is the environment extremely modified through technology by human beings.
- *Excess use of resources* that are non-renewable (fossil fuels) causes great harm to the ecosystem.
- They affect the ecosystem by *habitat destruction*. Industrialization, pollution, deforestation, urbanization, building dams, etc. are some examples of anthropogenic changes.



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Scope of Environmental Studies

- To study the Natural History of a forest, a river, a mountain, a desert and a combination of all these elements.
- To understand our dependence on nature so that we can develop skills to manage and conserve it.
- To create awareness and sensitivity towards the environmental problems.
- To motivate active participation towards environmental protection and improvement.
- To evaluate the necessity towards the conservation of natural resources.

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Importance of Environmental Studies

1. By learning the knowledge of environmental studies people will understand the concept "the need of development without destruction of the environment."
2. It is useful in checking environmental pollution and related solutions.
3. It helps in maintaining ecological balances.
4. It helps to gain skills to assess the environmental impact of human activities. It will help to protect biodiversity.
5. It gives us basic knowledge of environment and associated problems
6. It helps to achieve sustainable development.
7. It helps to educate people regarding their duties towards the protection of environment.

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Environment Communication

➤ Environmental communications is defined as the assessment and practice of how people, societies and organizations interact with and effect the environment. It includes a variety of interactions, ranging from interpersonal communications to media coverage related to the environment. In essence, it refers to the strategies and practices that are used to manage and protect the environment.

➤ The need of the hour is to make the public aware of the consequences of the environmental degradation, if not corrected and reformative measures are undertaken, would result in the extinction of life. It is also necessary to face the various environmental challenges and to act accordingly to make the acts eco-friendly. The major challenges ahead are the following:

A. *Population Exploitation*
 B. *Reduction of Genetic Diversity*
 C. *Agricultural Growth*

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Need for Public Awareness

➤ To identify various plants and animals and other components of the environment that are endangered.

➤ To take appropriate actions regarding the use of natural resources.

➤ To conserve depleting natural resources for the betterment of the society.

➤ To adopt appropriate ways and solve existing environmental problems.

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Natural Resources

What are Natural Resources?

- The materials we use from nature such as wind energy, water, plants, animals, and fossil fuels to make the things we need are called natural resources.
- They are the basis of life on Earth.
- They are divided into two broad categories: renewable and non-renewable natural resources.

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TYPES OF NATURAL RESOURCES

- Based on the availability, there are two types of natural resources:

- Renewable:** resources that are available in infinite quantity and can be used repeatedly are called renewable resources. Example: Forest, wind, water, etc.
- Non-Renewable:** resources that are limited in abundance due to their non-renewable nature and whose availability may run out in the future are called non-renewable resources. Examples include fossil fuels, minerals, etc.

Renewable resource	Non-renewable resource
It can be renewed as it is available in infinite quantity	Once completely consumed, it cannot be renewed due to limited stock
Sustainable in nature	Exhaustible in nature
Low cost and environment-friendly	High cost and less environment-friendly
Replenish quickly	Replenish slowly or do not replenish naturally at all

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The 5 Most important natural Resources are:

- Forests:** Forests maintain the world's ecosystem and offer clean air.
- Water:** Earth is 70 percent covered with water and only 2 percent of that is freshwater.
- Minerals:** Minerals are vital for the construction, manufacturing and energy industries.
- Soil:** Different particles and nutrients make up soil. It promotes plant growth.
- Air:** For all plants, animals, and humans to exist on this planet, the air they breathe must be clean.


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Natural Resources & Associated Problems

- Exploitation of natural resources** started to emerge on an industrial scale in the 19th century as the extraction and processing of raw materials (such as in mining, steam power and machinery).
- During the 20th century, energy consumption rapidly increased. Today, about 80% of the world's energy consumption is sustained by the extraction of fossil fuels, which consists of oil, coal and natural gas.
- There are many problems associated with natural resources:


<p>Forest resources and associated problems</p> <ol style="list-style-type: none"> Deforestation. Timber extraction. Mining and its effects on forest. 	<p>Food resources and associated problems</p> <ol style="list-style-type: none"> Changes caused by agriculture and over grazing. Fertilizer-pesticide problems. Water logging and salinity.
<p>Water resources and associated problems</p> <ol style="list-style-type: none"> Floods, droughts etc. Conflicts over water. Dams and problems. 	<p>Energy resources and associated problems</p> <ol style="list-style-type: none"> Growing energy needs.
<p>Mineral resource and associated problems</p> <ol style="list-style-type: none"> Use and exploitation. Environmental effects of extracting and using minerals. 	<p>Land resources and associated problems</p> <ol style="list-style-type: none"> Land degradation. Man-induced landslides. Soil erosion and desertification.

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 **Causes of Exploitation**

- 1) **Increases in the sophistication of technology** has enabled natural resources to be extracted quickly and efficiently. E.g., in the past, it could take long hours just to cut down one tree only using saws. Due to better technology, the rates of deforestation have greatly increased.
- 2) **The number of humans is increasing.** According to the UN, the world population was 7.6 billion in 2017. This number is expected to rise to about 10 billion in 2050 and about 11 billion in 2100.
- 3) **Consumerism.** Materialistic views lead to the mining of gold and diamonds to produce jewellery. Consumerism also leads to extraction of resources for the production of commodities necessary for human life but in amounts excessive of what is needed, because people consume more than is necessary or waste what they have.
- 4) **Excessive demand** often leads to conflicts due to intense competition. Organizations such as Global Witness and the United Nations have documented the connection.
- 5) **Lack of awareness** among the population is striking. People are not aware of ways to reduce depletion and exploitation of materials.


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 **Natural Resources and Associated Laws**

Genesis of Environmental Laws in India

- The environmental law in India protects the environment. Prevention of air, water, noise pollution, protection of ancient monuments etc.
- Most of the laws were codified by British for Environmental Protection. Some examples are-
 - Shore Nuisance Act in 1853
 - Indian Forest act in 1865
 - Wild Birds and animal Protection act in 1912
 - Explosive Substance Act in 1908

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The Stockholm Declaration (1972)

- Held at Stockholm (Sweden) at the UN Conference on Human Environment and Development in 1972.
- It is a Magna Carta of Environmental Law.
- About 26 principle related to environment and development were laid out in this conference.
- After the conference, India made its 42nd amendment in the constitution and incorporated Article 48A and Article 51A.

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Constitutional Provisions for Environmental Protection

Article 21: 'The Right to Life'- The constitution of India provides us the Right to Live in a clean and healthy environment.

Article 38: Social order for the **welfare of people** through unpolluted and clean environment.

Article 51A: It shall be the duty of every citizen of India to **Protect and Improve Natural Environment**- forests, lakes, rivers, wildlife and compassion for living creatures. It is a fundamental duty of every citizen.

Article 48A: For protection and improvement of environment and **safeguard forests and wildlife of India**. It imposes a ban on things that have environmental degradation like plastic bags etc. It also refers to the alternatives that can be used for improvement of environment.

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Acts of Environmental Protection

The Water (Prevention and control of pollution) Act 1974:

- For the prevention and control of water pollution and for restoration of wholesomeness of water in the country.
- The first law passed in India to prevent domestic and industrial pollutants are not to be discharged into lakes and rivers without adequate treatment.

The Air (Prevention and control of pollution) Act 1981:

- The objective is to prevent, control and reduce air pollution including noise pollution.
- Under provisions of this act, no person shall, without consent of the SPCB establish or operate an industrial plant in air pollution controlled area.
- It also includes preservation of quality of air.


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Enforcement Agencies

- Pollution Control Boards are statutory bodies (have own laws of governance). They were constituted to control pollution in 1974, thereby protecting the environment from further degradation.
- They are of two types : Central Pollution Control Boards(CPCB) and State Pollution Control Boards(SPCB).


<p>Functions & powers of Central Pollution Control Board (CPCB)</p> <ul style="list-style-type: none"> Plan and organize training of persons engaged in programs for prevention, control or abatement of water and air pollution. Organize through mass media, a comprehensive mass awareness program on prevention, control or abatement of water and air pollution. Collect, compile and publish technical and statistical data relating to water and air pollution and the measures devised for their effective prevention, control and abatement. Propose rules, codes and guidelines relating to treatment and disposal of sewage and trade effluents as well as for black gas cleaning chimneys, stacks and ducts. 	<p>Functions & powers of State Pollution Control Board (SPCB)</p> <ul style="list-style-type: none"> Plan and organize training of persons engaged in programs for prevention, control or abatement of water and air pollution. Organize through mass media, a comprehensive mass awareness program on prevention, control or abatement of water and air pollution. To perform any function entrusted by Central board or by State government. To prescribe the effluent standards for sewage. To inspect, waste water treatment plants.
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 **Role of Media in Conservation**


- As far as the environmental issues are concerned, media either as a risk communicator or as a promoter of data, information, and good practices of any kind, should smooth the progress of people to become more environmentally responsible and cultivate environmental awareness. Additionally, media could help people associate reasons and effects, thus to get informed and to reflect upon the given information, in order to understand the origins and the causes of the major environmental problems. Mass Media plays an important role in creating environmental awareness among people.
- Types of media for environmental awareness
- **Radio** happens to be the cheapest and easily accessible. The signals and frequencies of radio are covering almost the whole country. Thus it can be used as a significant medium of creating environmental awareness. The latest drive of radio channel FM 93.5 "MOUNT GHAZIPUR" has created awareness among Delhiites regarding the hazards of culminating waste on our environment. The weekly half-hour radio magazine Living Planet tells environment stories from around the world, digging deeper into topics that touch our lives every day.

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- **Television** is another very good mode to communicate environmental issues among the society. Certain television channels like Discovery Channel, National Geographic Channel, animal planet Channel broadcast exclusively on endangered species, wild and sea life. Doordarshan Channel is being telecasted all over India and has regular programs on Environment. "Earth Matters" focuses on one special environmental problem. It offers information on the sources, explains the consequences of the problem considered and gives suggestions for the solution by changing individual behaviour.
- **Print media** is a powerful ally in educating the public on environmental matters. Newspapers, journals, magazines, etc. play a key role in providing relevant information with required facts and pictures to the community. Articles and analyses explore the environmental awareness in the common man about environmental problems. Sometimes separate column is there for environmental issues;
- **Social Media.** Today's young generation makes ample use of social media and internet platforms. They have emerged altogether as a new form of media. Facebook, Twitter, WhatsApp are connecting today's generation. Certain global environmental issues can be discussed on these platforms continuously. Government agencies and industries are also utilising social media as a preferred tool of communication with the mass. Green on Facebook: One Page for Eco Resources, Adopt a Tiger Through the World Wildlife Fund, etc are some Facebook pages on environment.

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 **Role of Media In Awareness**

- **Provides geographical knowledge** - Newspapers, radio, television, and even the internet are providing a comprehensive understanding of geographical knowledge to people. What is happening in the world today, which place has been ignored and the relevant representations made through different forms of media produces deep effects on the people.
- **Identification of forces affecting nature** - Currently, human beings are building an artificial man made environment by over utilising the natural resources in the name of economic and social development. Media can report and educate people about certain forces and activities that adversely affect our environment.
- **Conservation of natural resources** - Our primary target is not only controlling the wastage of various sources of energy like oil, gas, coal, etc. the main focus should be on certain relative aspects which serve as a means of environmental protection.
- **Vocational information** -Media also helps in providing vocational and professional information to a larger group of the community. Recent programs on guidance about conversion of waste and garbage into compost by households to save environment is an illuminating illustration.
- **Spreading awareness and civic responsibility** -Media create awareness among people and enlighten them about different problems of society. Media educates people about their roles in changing society through certain events and programs. Helps to know how people can contribute towards environmental protection and sustainability and build healthy environment.

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