

## CHAPTER 3

### ENVIRONMENT AND SOCIETY

#### 2Marks Questions:

**1.What is meant by ecology?**

**Answer:**

Ecology is the study of relationship between living things and their environment which includes biological and geographical conditions.

Mountains, rivers, flora and fauna are parts of ecology

**2.What is environment?**

**Answer:**

Everything which surrounds us is called environment. It includes both biological and geographical conditions.

It is total web of life which includes physical characteristics of a particular region as well as plants and animals.

**3.What is cultural environment?**

**Answer:**

Man made environment is known as cultural environment.

Traditions, folkways, language, beliefs, art and literature, social values are part of cultural environment.

**4.What is social ecology?**

**Answer:**

It refers to the branch of general ecology. The interrelationship of biological, physical and cultural features of a region is the domain of social ecology.

### **5. What is the meaning of resources depletion?**

#### **Answer:**

Excessive usage of non-renewable natural resources are called resources depletion. It is limited e.g. Mineral, coal, natural gas, petroleum etc. The next generation will be deprived from these resources.

### **6. What is deforestation?**

#### **Answer:**

The process of cutting trees gradually reduce the forest land. The cleared land is used by people for so called development i.e., industrialization and housing. The whole process is known as deforestation.

### **7. What is eco system?**

#### **Answer:**

Human beings, animals and plants are living components of universe.

The environment is inorganic. Non-living component of this system includes heat, energy, land, water bodies, temperature, gases etc.

Eco system is interrelationship of these two components.

### **4Marks Questions:**

**1.What are the major environmental issues associated with resource depletion?**

**Answer:**

- Resource depletion i.e., using up non-renewable natural resources is one of the most serious environmental problems.
- The rapid decline in groundwater levels is an acute problem all over India, especially in the states of Punjab, Haryana and Uttar Pradesh.
- Rivers have also been dammed and diverted, causing irreversible damage to the ecology of water basins.
- Many water bodies in urban areas have been filled up and built upon, destroying the natural drainage of the landscape.
- Like groundwater, topsoil too is created over thousands of years. This agricultural resource, too, is being destroyed due to poor environmental management leading to erosion, water-logging and salinization.
- The production of bricks for building houses is another reason for the loss of topsoil.
- Biodiversity habitats such as forests, grasslands and wetlands are the other major resources facing rapid depletion, largely due to the expansion of areas under agriculture.

**2. Describe the two-way process by which ‘social environments’ emerge.**

**Answer:**

- Social environment emerges from the interaction between biophysical ecology and human interventions.
- This is a two-way process just as nature shapes society, society shapes nature. For instance, the fertile soil of the Indo-Gangetic floodplain enables intensive agriculture. Its high productivity allows dense population settlements and generates enough surpluses to support other, non-agricultural activities, giving rise to complex hierarchical societies and states.
- In contrast, the desert of Rajasthan can only support pastoralists who move from place to place in order to keep their livestock supplied with fodder.
- These are instances of ecology shaping the forms of human life and culture.
- On the other hand, the social organization of capitalism has shaped nature across the world.

### **3. Explain why environmental problems are simultaneously social problems.**

**Answer:**

- Environmental problems affect different groups.
- Social status and power determine the extent to which people can insulate themselves from environmental crises or overcome it.
- In Kutch, Gujarat, where water is scarce, richer farmers have invested in deep bore tubewells to tap groundwater to irrigate their fields and grow cash crops. When the rain fails, the earthen wells of the poorer villagers run dry and they do not even have water to drink.
- At such times the moist green fields of the rich farmers seem to mock them. Certain environmental concerns sometimes appear to be universal concerns, not particular to specific social groups.
- A sociological analysis shows how public priorities are set and how they are pursued may not be universally beneficial. Securing the public interest may actually serve the interests of politically and economically powerful groups, or hurt the interests of the poor and politically weak.

### **4.What is meant by social ecology?**

**Answer:**

- The School of Social Ecology points out that social relations, in particular the organization of property and production, shapes environmental perceptions and practices.
- Different social groups stand in different relationships to the environment and approach it differently.
- The Forest Department geared to maximizing revenues from supplying large volumes of bamboo to the paper industry will view and use a forest very differently from an artisan who harvests bamboo to make baskets. Their varied interests and ideologies generate environmental conflicts. Environmental crises have their roots in social inequality.
- Addressing environmental problems require changing environment society relations, and this in turn requires efforts to change relations between different social groups-men and women, urban and rural people, landlords and labourers.

**5. Describe in your own words what you understand by the term ‘ecology’.**

**Answer:**

- All societies have an ecological basis. The term ‘ecology’ denotes the web of physical and biological systems and processes of which humans are one element.
- Mountains and rivers, plains and oceans, and the flora and fauna that they support, are a part of ecology.
- The ecology of a place is also affected by the interaction between its geography and hydrology. For example, the plant and animal life unique to a desert is adapted to its scarce rainfall, rocky or sandy soils, and extreme temperatures.
- Ecological factors limit and shape how human beings can live in any particular place.

**6. Why is ecology not limited only to the forces of nature?**

**Answer:**

- Ecology has been modified by human action. It appears to be a natural feature of the environment. For example, the situation of aridity and flood is often produced by human intervention.
- Deforestation in the upper catchment of a river may make the river more flood- prone.
- Climate change brought about by global warming is another instance of the widespread impact of human activity on nature.
- Over time, it is often difficult to separate and distinguish between the natural and human factors in ecological change.
- There are other ecological elements around us that are obviously human-made.
- An agricultural farm with its soil and water conservation works, its cultivated plants and domesticated animals, its inputs of synthetic fertilisers and pesticides, is clearly a human transformation of nature.

## **7. Why is environmental management a complex and huge task for society?**

### **Answer:**

- Environmental management is, however, a very difficult task.
- Difficult process to predict and control them.
- Human relations with the environment have become increasingly complex.
- With the spread of industrialisation, resource extraction has expanded and accelerated, affecting ecosystems in unprecedented ways.
- Complex industrial technologies and modes of organization require sophisticated management systems which are often fragile and vulnerable to error.
- We live in risk societies using technologies and products that we do not fully grasp.
- The occurrence of nuclear disasters like Chernobyl, industrial accidents like Bhopal, and Mad Cow disease in Europe shows the dangers inherent in industrial environments.

### **7Marks Questions:**

#### **1. Why and how does social organisation shape the relationship between the environment and society?**

**Answer:**

- The interaction between environment and society is shaped by social organization. :
- Property relations determine how and by whom natural resources can be used. For instance, if forests are owned by the government, it will have the power to decide whether it should lease them to timber companies or allow villagers to collect forest produce.
- Private ownership of land and water sources will affect whether others can have access to these resources and on what terms and conditions.
- Ownership and control over resources is also related to the division of labour in the production process.
- Landless labourers and women will have a different relationship with natural resources than men.
- Social organization influences how different social groups relate to their environment.
- Different relationships between environment and society also reflect different social values and norms, as well as knowledge systems.
- The values underlying capitalism have supported the commodification of nature, turning it into objects that can be bought and sold for profit. For instance, the multiple cultural meanings of a river – its ecological, utilitarian, spiritual, and aesthetic significance, are stripped down to a single set of calculations about profit and loss from the sale of water for an entrepreneur.
- Socialist values of equality and justice have led to the seizure of lands from large landlords and their redistribution among landless peasants in a number of countries.
- Religious values have led some social groups to protect and conserve sacred groves and species and others to believe that they have divine sanction to change the environment to suit their needs.

## **2. What are some of the important forms of pollution related environmental hazards?**

**Answer:**

- Air pollution is considered to be a major environmental problem in urban and rural areas, causing respiratory and other problems which result in serious illness and death.
- The sources of air pollution include emissions from industries and vehicles, as well as the burning of wood and coal for domestic use.
- Indoor pollution from cooking fires is also a serious source of risk. This is particularly true of rural homes where wood fires using green or poorly burning wood, badly designed fireplaces (chulhas), and poor ventilation combine to put village women at serious risk because they do the cooking.
- The World Health Organisation has estimated that almost 600,000 people died due to (cumulative) indoor pollution related causes in India in 1998, almost 500,000 of them in rural areas.
- Water pollution is also a very serious issue affecting surface as well as groundwater.
- Major sources include not only domestic sewage and factory effluents but also the run-off from farms where large amounts of synthetic fertilisers and pesticides are used.
- The pollution of rivers and water bodies is a particularly important problem.

Cities also suffer from noise pollution, which has been the subject of court orders in many cities. Sources include amplified loudspeakers used at religious and cultural events, political campaigns, vehicle horns and traffic, and construction work.



**3. Discuss the impact of industrialization on the environment and society, highlighting both positive and negative aspects.**

**Answer:**Industrialization has had profound effects on both the environment and society. On the positive side, it has led to economic growth, job creation, and technological advancements. However, the negative aspects include environmental degradation, pollution, and social inequalities. Rapid industrialization often results in the depletion of natural resources, air and water pollution, and disruption of ecosystems. Socially, it can lead to the concentration of wealth, exploitation of labor, and adverse health effects on communities. Striking a balance through sustainable industrial practices is essential to mitigate these negative impacts.

Sustainable development refers to the practice of meeting the needs of the present without compromising the ability of future generations to meet their own needs. It involves balancing economic, social, and environmental considerations. In the context of the relationship between the environment and society, sustainable development is crucial as it ensures that human activities do not harm the environment irreversibly.

**4. Examine the role of education in promoting environmental awareness and responsibility within society. Provide examples of how education can contribute to sustainable practices.**

**Answer:**Education plays a pivotal role in shaping environmental awareness and responsibility in society. It equips individuals with knowledge about the interdependence of human activities and the environment. For instance, incorporating environmental studies into school curricula helps instill a sense of responsibility towards nature.

Moreover, higher education can foster research and innovation for sustainable solutions to environmental challenges. Beyond formal education, awareness campaigns, workshops, and community engagement programs further enhance environmental consciousness. Education empowers individuals to make informed choices, promoting sustainable practices such as recycling, conservation, and the adoption of eco-friendly technologies. . By promoting responsible resource use, conservation, and social equity, sustainable development fosters a harmonious coexistence between society and the environment.

### **Fill in the Blanks:**

1. The \_\_\_\_\_ refers to the complex web of relationships between living organisms and their environment.
2. Human activities such as deforestation and industrial emissions contribute to the \_\_\_\_\_ effect, leading to global warming.
3. Environmental \_\_\_\_\_ involves the responsible use of resources to ensure sustainability for future generations.
4. The study of how people interact with their environment and the impact of these interactions is known as \_\_\_\_\_.
5. The concept of \_\_\_\_\_ emphasizes the interconnectedness of social systems and the environment.
6. Pollution from sources like factories and vehicles can result in \_\_\_\_\_ degradation, harming ecosystems and human health.
7. The depletion of the ozone layer is primarily caused by the release of \_\_\_\_\_ into the atmosphere.
8. Sustainable development aims to meet the needs of the present without compromising the ability of \_\_\_\_\_ to meet their own needs.
9. \_\_\_\_\_ is the study of the distribution and abundance of living organisms in relation to environmental conditions.
10. The process of converting waste materials into reusable materials is known as \_\_\_\_\_.

### **Answer:**

1. Ecosystem
2. Greenhouse
3. Conservation
4. Environmental sociology
5. Socioecological
6. Environmental
7. Chlorofluorocarbons (CFCs)
8. Future generations
9. Ecology
10. Recycling

### **Multiple Choice Questions:**

**1. What is the primary focus of the relationship between environment and society?**

- a. Environmental preservation
- b. Societal development
- c. Mutual dependence
- d. Complete separation

**2. Which of the following is an example of a social factor that can impact the environment?**

- a. Temperature
- b. Deforestation
- c. Population growth
- d. Soil erosion

**3. What term is used to describe the set of practices aimed at minimizing the environmental impact of human activities?**

- a. Ecology
- b. Conservation
- c. Sustainability
- d. Pollution

**4. In the context of environmental ethics, which viewpoint emphasizes the intrinsic value of nature independent of its utility to humans?**

- a. Anthropocentrism
- b. Biocentrism
- c. Ecocentrism
- d. Technocentrism

**5. What is the concept that suggests the responsibility to protect the environment for future generations?**

- a. Environmental justice
- b. Intergenerational equity
- c. Sustainable development
- d. Biodiversity conservation

**6. Which international agreement aims to address climate change by reducing greenhouse gas emissions?**

- a. Montreal Protocol
- b. Kyoto Protocol
- c. Paris Agreement
- d. Stockholm Convention

**7. What is the term for the process of gradual change in all living organisms over generations?**

- a. Evolution
- b. Adaptation
- c. Mutation
- d. Extinction

**8. Which of the following is a major factor contributing to habitat destruction and loss of biodiversity?**

- a. Conservation efforts
- b. Urbanization
- c. Reforestation
- d. Ecotourism

**9. What is the main purpose of Environmental Impact Assessment (EIA)?**

- a. Promote pollution
- b. Evaluate potential environmental effects of a project
- c. Encourage deforestation
- d. Ignore ecological consequences

**10. Which social movement focuses on promoting sustainable and equitable consumption practices?**

- a. Greenpeace
- b. Slow Food Movement
- c. Sierra Club
- d. Earth First!

**Answer:**

- 1. C
- 2. C
- 3. C
- 4. B
- 5. B
- 6. C
- 7. A
- 8. B
- 9. B
- 10. B

## Summary:

### **Human Impact on the Environment:**

Activities such as industrialization, deforestation, and pollution have significant effects on ecosystems.

Resource exploitation, overconsumption, and waste generation contribute to environmental degradation.

### **Environmental Consequences:**

Climate change, loss of biodiversity, and depletion of natural resources are some of the consequences of human-induced environmental changes.

These consequences pose challenges to the well-being and sustainability of both ecosystems and human societies.

### **Social Responses to Environmental Issues:**

Communities, governments, and organizations respond to environmental challenges through policies, regulations, and conservation efforts.

The concept of sustainable development emphasizes the need to balance economic, social, and environmental considerations.

### **Inequality and Environmental Justice:**

Environmental issues often disproportionately affect marginalized communities.

Discussions around environmental justice emphasize the fair distribution of environmental benefits and burdens.

### **Global Perspectives:**

Environmental challenges are not confined by national borders, requiring international cooperation and agreements.

Global initiatives, such as climate change accords, aim to address shared environmental concerns.

**Technological Solutions:**

Advances in technology can offer solutions to environmental problems, such as renewable energy sources, eco-friendly practices, and innovative conservation methods.

**Individual and Collective Responsibility:**

Recognizing the role of individuals in shaping environmental outcomes, the lesson may highlight the importance of sustainable lifestyles and responsible consumption.

**Adaptation and Resilience:**

Societies need to adapt to changing environmental conditions and build resilience to cope with the impacts of climate change and other environmental challenges.