

BABED 2 SEM
ENVIRONMENT
UNIT – 5

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HUMAN POPULATION GROWTH

Population growth is the increase in the number of people living in a particular area. Since populations can grow exponentially, resource depletion can occur rapidly, leading to specific environmental concerns such as global warming, deforestation and decreasing biodiversity. Populations in developed countries trend toward using substantially more resources, while populations in developing countries feel the impacts of environmental problems more quickly.

Michel's definition: Sustainability: a social and economic system is considered "sustainable" if the needs and demands of the present generation can be met without diminishing the possibility of fulfilling, minimally, a comparable set of needs and demands for all future generations.

Can think of sustainable much like permanent income: the level of consumption supported with no reduction of assets. When considering the effect of population growth on sustainability, we have to look at the impact of population growth on:

• **Resource Scarcity:**

- Food
- Energy (coal, oil, uranium)
- Raw materials (iron, copper, wood, water)

• **Environmental Impacts**

- Pollution (air, water, soil)
- Soil degradation
- Deforestation
- Atmosphere (ozone layer, global warming)

_ Biodiversity (number of species of plants and animals)

Effects of Population Growth on our Environment

One of the factors responsible for environment degradation is population growth or population density. In particular, population density plays the most important role in shaping the socio-economic environment. Its effects are felt on the natural environment also.

1. Generation of Waste:

Due to his destructive activities, man has dumped more and more waste in environment. As the man-made waste is not transformed, it causes degradation and the capacity of environment to absorb more waste is reduced. Further, waste leads to air and water pollution.

2. Threat to Biodiversity:

Due to his destructive activities, man has extracted more and more minerals from the earth. Animals have been hunted and plants have disappeared. There has been loss of biodiversity. These have led to ecological imbalance.

3. Strain on Forests:

Man has established new housing colonies. National highways and hydropower projects have been built and forests have been wiped out. These destructive activities have increased and led to ecological imbalance.

4. Urbanization:

Rapid growth of population has led to urbanization which has adversely affected environment. Due to population pressure, natural resources in the cities are depleted at a fast rate due to population pressure.

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Moreover, population does not have proper sanitation facilities and pure drinking water. As a result, the health of the people is adversely affected. No doubt, urbanization reduces pressure on the rural environment, but it brings with it environmental damages through industrial growth, emissions and wastes.

5. Industrialisation:

Underdeveloped countries are following the policy of heavy industrialisation which is causing environmental degradation. The establishment of such industries as fertilizers, iron and steel, chemicals and refineries have led to land, air and water pollution.

6. Land Degradation:

Intensive farming and excessive use of fertilizers and pesticides have led to over-exploitation of land and water resources. These have led to land degradation in the form of soil erosion, water logging and salination.

7. Transport Development:

Environmental degradation is also due to transport development in the different parts of the world. The automobiles release huge quantities of poisonous gases such as carbon monoxide, nitrogen oxides and hydrocarbons. The development of ports and harbours have led to oil spills from ships adversely affecting fisheries, coral reefs, mangroves and landscapes.

8. Climatic Change:

Climatic changes are irregular due to green house gases. The thin skin of air that surrounds the planet is being affected by human activities as never before. Urban people are still being exposed to unaccepted levels of toxic pollutants. Further, forests are still being degraded by acid deposition generated by faraway industries, and greenhouse gases continue to accumulate in the atmosphere.

9. Productivity:

Environmental degradation not only harms health but also reduces economic productivity. Dirty water, inadequate sanitation, air pollution and land degradation cause serious diseases on an enormous scale in developing countries like India.

These, in turn, reduce the productivity levels in the country. To take specific instances, water pollution has led to declining fisheries in rivers, ponds and canals in both urban and rural areas. Water shortages have reduced economic activity in towns, and cities and villages.

Soil and hazardous wastes have polluted ground water resources which cannot be used for agricultural and industrial production.

Soil degradation leading to soil erosion, drought, etc. have led to siltation of reservoirs and blocking of river and canal transport channels. Deforestation has led to soil erosion and consequent loss of sustainable logging potential.

Loss of bio-diversity has resulted in the loss of genetic resources.

Last but not the least, atmospheric changes have given rise to disruption of marine food chain, damages to coastal infrastructure due to sea-rise and regional changes in agriculture productivity due to hurricanes in seas.

Thus, environmental degradation undermines economic productivity of a nation.

10. Technology:

Presently, environmental pollution is caused by old technology which releases gases and pollutants causing chemical and industrial pressure on environment.