

# Environmental Degradation

## Definitions

- Erosion of the quality of natural environment caused, directly or indirectly, by human activities.
- Environmental degradation are defined as action taken by people that cause the planet earth or its systems (air, water etc) to become damaged or harmed some way.



Environmental degradation is a result of socio economical technological and institutional activities. Degradation occurs when earth natural resources are depleted. The degradation also impact our:

- **Wildlife**
- **Plants**
- **Animals**
- **Micro-organisms**

## **How environmental degradation occurs**

Environmental degradation is based on many factors including:

- urbanization
- The population growth
- Intensification of agriculture
- Increase in energy use
- Increase in transportations
- High quality of Exhaust gases
- Secondary pollutants
- High number of industries
- Unplanned land use policies

### **Urbanization**

Urban populations interact with their environment. Urban people change their environment through their consumption of food, energy, water, and land. And in turn, the polluted urban environment affects the health and quality of life of the urban population.

### **The population growth**

Population growth has had a negative impact on the quality of the environment. As more land is used for agriculture or living purposes, the environment changes drastically. As the population of humans grows in certain cities or rural areas, more resources must be used to maintain the well-being of the population. With the increasing pressure on available resources, many habitats are being destroyed. Humans are using up more resources and the amount and nature can't replenish those resources fast enough to supply our needs. The atmosphere is also negatively impacted by population growth.

### **Intensification of agriculture**

Agricultural intensification has resulted in the loss of biodiversity and ecosystem services on farmland. Intensification took place simultaneously at the field, farm and landscape scale. To gain more insight into the most important components of agricultural intensification affecting biodiversity, it is necessary to disentangle the influence of these different components.

### **Increase in energy use**

All energy sources have some impact on our environment. Fossil fuels—coal, oil, and natural gas—do substantially more harm than renewable energy sources by most measures, including air and water pollution, damage to public health, wildlife and habitat loss, water use, land use, and global warming emissions.

### **Increase in transportations**

Transport is significant because transport is a major user of energy, and burns most of the world's petroleum. This creates air pollution, including nitrous oxides and particulates, and is a significant contributor to global warming through emission of carbon dioxide. Within the transport sector, road transport is the largest contributor to global warming.

### **High quality of Exhaust gases**

Air pollutants are responsible for a number of adverse environmental effects, such as photochemical smog, acid rain, death of forests, or reduced atmospheric visibility. Emissions of greenhouse gases from combustion of fossil fuels are associated with the global warming of Earth's climate.

### **Secondary pollutants**

Secondary pollutant include ozone, which is formed when hydrocarbons (HC) and nitrogen oxides (NO<sub>x</sub>) combine in the presence of sunlight; NO<sub>2</sub>, which is formed as NO combines with oxygen in the air; and acid rain, which is formed when sulfur dioxide or nitrogen oxides react with water.

### **High number of industries**

Industries and factories give off various pollutants into the environment including the land, air, and waters. It is estimated that about 50% of all pollution is as a result of industrial and manufacturing activities. It only displays how industries and factories are responsible for giving off toxic and dangerous materials into the environment. Illnesses, loss of life, and destruction of the ecosystem are some of the pollution outcomes that take years to manifest. Even so, there are a wide range of industrial pollution effects along with their serious consequences.

## **Unplanned land use policies**

Irregular and unsound urban development is the common problem of all urban settlements today. The increasing continuation of this problem is inevitable in this order, where the economy-ecology balance is not taken into consideration and economic concerns always win.

## **Effects of environmental degradation on both health and productivity**

### **Water pollution and water scarcity**

Water pollution comes from many sources including pesticides and fertilizers that wash away from farms, untreated human wastewater, and industrial waste. Even groundwater is not safe from pollution, as many pollutants can leach into underground aquifers.

### **Air pollution**

Air pollution occurs when harmful or excessive quantities of substances including gases, particles, and biological molecules are introduced into Earth's atmosphere. It may cause diseases, allergies and even death to humans; it may also cause harm to other living organisms such as animals and food crops, and may damage the natural or built environment. Both human activity and natural processes can generate air pollution.

### **Solid and hazardous waste**

Solid waste means any garbage, refuse, sludge from a wastewater treatment plant, water supply treatment plant, or air pollution control facility and other discarded materials including solid, liquid, semi-solid, or contained gaseous material, resulting from industrial, commercial, mining and agricultural operations.

### **Soil degradation**

Soil degradation is the decline in soil condition caused by its improper use or poor management, usually for agricultural, industrial or urban purposes. It is a serious environmental problem. Soils are a fundamental natural resource, and are the basis for all terrestrial life. Avoiding soil degradation is crucial to our well-being.

### **Deforestation**

Deforestation, clearance, or clearing is the removal of a forest or stand of trees from land which is then converted to a non-forest use. Deforestation can involve conversion of forest

land to farms, ranches, or urban use. The most concentrated deforestation occurs in tropical rainforests.

### **Loss of biodiversity**

Biodiversity loss is the extinction of species (plant or animal) worldwide, and also the local reduction or loss of species in a certain habitat. ... Ecological effects of biodiversity are usually counteracted by its loss

### **Atmospheric change**

The burning of fossil fuels is producing a worldwide increase in the atmospheric concentration of carbon dioxide, which transmits visible light but traps infrared radiation near the Earth's surface. This so-called "greenhouse effect" will produce a global warming trend.

### **Solutions of environmental degradation**

#### **Afforestation**

Afforestation is the process of planting trees, or sowing seeds, in a barren land devoid of any trees to create a forest. The term should not be confused with reforestation, which is the process of specifically planting native trees into a forest that has decreasing numbers of trees

#### **Mixed crops or crop rotation**

Mixed cropping refers to the practice of growing two or more crops together on the same piece of land while crop rotation is the practice of growing different crops in succession on a piece of land. ... The basic aim of crop rotation is to maintain soil nutrient balance.

#### **Drip irrigation**

Drip irrigation is a type of micro-irrigation system that has the potential to save water and nutrients by allowing water to drip slowly to the roots of plants, either from above the soil surface or buried below the surface. The goal is to place water directly into the root zone and minimize evaporation

### **Stocking your land**

Stocking rate is defined as the number of animals on a given amount of land over a certain period of time. Stocking rate is generally expressed as animal units per unit of land area. Carrying capacity is the stocking rate that is sustainable over time per unit of land area.

### **Purchase recycled products**

Recycling is the process of converting waste materials into new materials and objects. ... Recycling can prevent the waste of potentially useful materials and reduce the consumption of fresh raw materials, thereby reducing: energy usage, air pollution (from incineration), and water pollution (from land filling)

### **Conserve water**

Water conservation refers to the preservation, control and development of water resources, both surface and groundwater, and prevention of pollution.

### **Conserve energy**

The total energy of an isolated system remains constant irrespective of whatever internal changes may take place with energy disappearing in one form reappearing in another

### **Be an advocate to save your planet**

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