

Environment Pollution and its impact on Flora and Fauna

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Environment is a comprehensive term which is in general refers to the surroundings but in geographical perspective environment includes abiotic and biotic components of the supporting layer the biosphere various physical, chemical



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and biological process are continuously engaged in the, creation, maintenance and destruction of surface materials of the earth's surface (organic and inorganic) Earth materials like minerals, rocks, soils, water etc are not created but are also maintained, changed in their properties, transferred from one place to another and even destroyed by geological cycle but these materials even while passing through the aforesaid pathways. Physical and biological processes of the natural environment system operate in such a way that any change in any part of the environment at any place in a specific time period is suitably compensated by negative feedback mechanism in a natural condition. Natural environment system has inbuilt self regulation mechanism known as homeostatic mechanism through which any change in the natural ecosystem counterbalance by responses of the system to the change and ultimately ecosystem stability is restored. Environmental degradation refers to the processes mainly by human activities to such an extent that it cannot be set right by the self regulatory mechanism or homeostatic mechanism of the environment

Type of environmental degradation

Environmental degradation is much bigger and comprehensive term which includes lowering and deterioration of environmental quality caused by both natural factors (as elaborated in the preceding sections) and anthropogenic factors from local level through regional level to global level. The events caused by either natural processes or anthropogenic processes, which bring immediate changes in the natural environment and inflict colossal damage and loss to the environment quality and living organism are called extreme events or hazards which are further divided into two broad categories viz. (i) natural hazards (like tropical cyclones, volcanic eruptions, earthquakes, flood, drought etc.) and (ii) anthropogenic hazards (like nuclear holocaust, chemical war, etc.) the deterioration of environmental quality beyond a critical limit caused by human activities is called pollution. The environmental degradation/deterioration may be classified as given below:

Environmental degradation divided into two categories on the basis of factors responsible for the lowering of environment quality and the level and magnitude of lowering/deterioration of environmental quality



- (1) Extreme events and hazards
- (2) Pollution

Extreme events and hazards have been widely classified and discussed in chapter 17 of this book.

Pollution

Pollution is caused by human activities and is generally divided into two broad categories.

(i) *Physical pollution*

Physical pollution is caused due to lowering of the quality of physical or abiotic components of the environment by human activities and is further divided into three subtypes.

(A) Land pollution

Examples: (a) accelerated rate of soil erosion through rill and gully erosion, (b) desertification, (c) soil pollution, (d) Salinization etc.

(B) *Water pollution*

Example: (a) pollution of sea water, (b) pollution of groundwater, (c) pollution of streams, (d) pollution of lakes etc.

(C) *Air pollution*

Examples: (a) depletion of ozone layer, (b) increase in the concentration of greenhouse gases in the atmosphere, (c) decrease in the quality of air, etc.

(II) *Social pollution*

Pollution caused in different aspects of the society due to cumulative effects of extreme events/hazards and pollution. Social pollution may be further divided into several sub-types.

- (A) Population Explosion : population increase at alarming rate
- (B) Sociological pollution: educational and social backwardness, (b) crimes (c) perpetual quarrels, (d) wars, (e) communal riots.
- (C) Economic pollution
Example: utter poverty of rural and urban areas.

Processes of environmental degradation

It is well known fact that environmental degradation and pollution are always considered in terms of living organisms in general and human beings in particular. It has been found that natural processes mainly extreme events also bring substantial changes in the natural environment but these changes are counterbalanced by the nature itself and no serious perpetual environmental and



ecological problems crop up but when man augments the rate and magnitude of natural extreme events and hazards these become lethal to natural environment and serious environmental problems are generated due to large-scale environmental degradation/deterioration. Secondly, man also degrades the environment through his increased economic activities. Thus environment degradation is effected in two ways viz. (i) through the augmentation and acceleration of extreme events and natural hazards by man, and (ii) through the exploitation of natural resources and their processing in variety of ways by man.

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