

## ENVIRONMENTAL DEGRADATION: CAUSES AND CONTROL

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### ABSTRACT

Environmental Degradation refers to the deterioration in its physical component brought in by the biological processes mainly by human activities to such an extent that it cannot be set right by self regulatory mechanism or homeostatic mechanism of the environment. The problem is alarming because of the increase in human population and its interference in nature which is badly effecting the environment by disturbing the natural balance i.e. ecosystems. There is an urgent need to maintain this delicate natural balance for the proper survival of human beings on this little planet Earth. In the present study various factors responsible for environmental degradation, its problems and preventive measures have been discussed.

**Keywords:** *Environmental degradation, Pollution, Homeostasis, awareness.*

### INTRODUCTION

Environment is the sum total of physical, chemical and biological components found in the biosphere. The biotic components of the environment includes other organisms (or biota) which influences the life of other organisms i.e. plants or animals under study, while the abiotic environment includes physico-chemical parameters like atmosphere, hydrosphere, lithosphere, temperature, light, pH, pressure, minerals, nutrients etc. Various processes i.e. physical, chemical and biological govern the natural environmental system or the biosphere system. These processes have a significant role in maintaining, creating and destruction of surface materials of the earth's system. These processes operate in such a manner that any kind of change in any part of environment gives negative effect in natural conditions. The environmental system has 'inbuilt self regulating mechanism' which is called as Homeostatic mechanism which functions on the principal that any change in environment caused by natural processes is compensated by changes in other component of the environment.

#### **Environmental Degradation**

Today the problem is alarming because of the increase in human population and its interference in nature. The human needs have resulted in urbanization, industrialization, deforestation and an increase in the number of automobiles which is badly effecting the environment by disturbing the natural balance i.e. ecosystems. All these activities have increased to such an extent that

nature is not able to maintain the Homeostasis or self-regulatory mechanism of the environment. Thus the environment is being degraded leaving direct impact on the ecology and causing ecological imbalance.

### **CAUSES:**

There are different causes of Environmental degradation, the important ones are:-

#### **(a) Industrial development**

Today the increasing developmental activities have no doubt increased our country economy but on the other hand it has become a major cause of environmental degradation. In the today's World industrialization has been considered as important parameter of modernity and development of nation. Hence we can say that the rate of industrialization is directly propotional to environmental degradation which includes loss of natural resources, ecological disturbances, environmental pollution, Acid rain, reduction of forests, reduction in land , global warming etc.

Increased industrialization is responsible for release of effluents consisting of toxic metals , gases etc. Today the environment is much more degraded in developed countries in comparison to the developed ones , the reason being the increased amount of toxic pollutants emitted from the factories which have degraded the environment of developed countries to a critical stage and brought the human society on the brink of its destruction. Acid rain, Photochemical Smog, Nuclear holocaust , Global warming etc. are some of the environmental hazards which results from increased industrialization.

#### **(b) Urbanization**

Everybody needs comfort, and for this comfort human beings starts interfering the natural balance of the biosphere which results in environmental degradation. Therefore urbanization is another problem related to environmental degradation. Human beings for their comfort construct road, buildings, industries, dams, streets, railway tracks, vehicles (motor cars, bus, truck, scooter etc.) with out thinking its ill effects. The main reason behind urbanization is increase in concentration of human population in limited space. The accumulation of wealth and job opportunities in urban centers, have resulted into concentration of population in the congested metropolitan areas and thus the formation and growth of big slum area. Today in our country metropolitan areas have reached high level of pollution, which includes Delhi, Bombay, Calcutta, Madras, Kanpur,

Ahmedabad etc. Urbanization may cause water pollution, air pollution, noise pollution, soil pollution, Solid waste problems, increased pressure on ground water resources etc.

**(c) Deforestation**

The clearing of forest for commercial or any other purposes is called as deforestation. Forests provide us timber, medicines, fruits, habitats for some animals etc. Besides this forests prevents soil erosion, reduces floods, encourage rainfall and overall they give us life saving oxygen. They are the major sink of Carbon dioxide.

**Factors influencing deforestation**

Growing energy needs

Conversion into agricultural land

Industrialization

Overgrazing

Forest fires

Shifting cultivation

Deforestation gave birth to several problems as Floods, Greenhouse effect, Siltation, and Change in pattern of precipitation etc.

**(d) Agricultural development**

Development of modern scientific techniques, use of chemical fertilizers, better irrigational facilities have no doubt increased our agricultural yield up to a great extent which has helped us in solving the food problem but on the other hand these techniques have created problems to our environment resulting environmental degradation. Thus the modern 'Economic' and 'Technological man' is at the cross road of dangers in all directions. The main reason behind agricultural development is increase in population, which causes increased demand of food. The agricultural development has degraded the environment in variety of ways i.e.

By using chemical fertilizers, pesticides, insecticides, weedicides, etc.

By increasing irrigational facilities and amount of irrigation.

By making changes in biological communities etc.

**(e) Population Growth:-** The most important cause of environmental degradation in the present World is excessive population growth, which is degrading environment and ecological balance at an alarming rate. Development of industries, appliances using CFC's, deforestation, automobiles

on road etc. are the greed and lust of 'Man' which has promoted to produce more and more goods for his comfort. Therefore the crux of this problem i.e. environmental degradation lies in the ever-increasing number in human population globally.

Thus it is obvious without doubt that overpopulation is the root cause of environmental degradation and ecological imbalance. The growth of population places greater demands on the natural resources present on earth. The rapid exploitation of these resources may cause its exhaustion in next few years. Due to overpopulation, food production is also decreasing at an alarming rate. It is estimated that to date in India, about one million people carry cellular phones in their hands and twenty million carry begging bowls. The number of bestial existence is on the rise. If this trend continues, then we would find a degenerate society and would behave like animals for our food and shelter (Chaturvedi and Habib, 2000). If for a moment, we presume that our country's population becomes half of what we are today. How do we feel! All roads will look deserted; most of the industries closes, the number of automobiles welching out smoke will reduce to a large extent and we will feel a pollution free environment and ours can be most beautiful, rich and prosperous Country in the World. Well this is still possible but it will take several years to motivate the people, to educate them and tell them the dangerous consequences if this trend does not revert. Would it be wise for us to leave a polluted society for our children?

## **CONTROL**

All of the above mentioned factors are responsible for environmental degradation up to a great extent which is clear from the above discussion but here a question arises that on one hand these factors are responsible for environmental degradation while on the other hand these factors are also helpful in Country's development . so what can we do ? Should we stop development or should we degrade our environment? The answer is that all the factors i.e. urbanization , industrialization etc are necessary but we should adopt Sustainable development to minimize the environmental degradation. Hence, we can say that pace of development should not be at the cost of environment because it is the natural environment, which ensures our existence on this very little planet i.e. EARTH.

From the above discussion we can easily say that the root cause of environmental degradation is increasing population because problems of environmental as deforestation, urbanization, industrialization, expansion of agricultural land, scientific advancement, technologies,

use of fertilizers, pesticides etc. are directly or indirectly related to growing population needs. Therefore if somehow the growth of this burgeoning population is checked, then we are sure, more than half of the problem is solved. Here are some of the preventive measures to save our environment from degradation.

### **Control of Population Growth**

The control of population growth is urgent need of India to maintain the ecological balance. In India the family welfare program was launched in 1951 but this program has not achieved the expected success till date, the main reasons are our diversified social, cultural and religious barriers towards this program. Today modern science has provided various types of birth control techniques i.e. chemical pills, surgical methods; physical and mechanical barriers etc. besides this hundreds of contraceptive methods are on trial. But the success would be achieved in control of population growth only when people of all castes and religion from all over the country participate and adopt family welfare program. The following are some other means to decrease population growth:-

- (i) Raising age of marriage for both boys and girls.
- (2) Maximum number of couples should adopt family planning.
- (3) By improving women status, giving opportunities for employment and education.

### **Public Awareness**

There is an old Chinese proverb "***If you plan for year, plant rice, if you plan for 10 years, plant trees and if you plan for 100 years educate people***" Therefore for proper survival of human beings they should be aware about the fact that by degrading the environment they are digging their graves with their own hands. Most of the people mainly from rural areas are not aware about the environmental degradation and its ill effects. Thus concrete steps should be taken to aware rural public and once we make honest efforts, our environment will certainly become better.

### **Proper use of natural resources**

With the elevation in living standards and needs of human beings, nature is being badly affected. The nature is being exploited for its natural resources at a faster rate. There is an urgent need to conserve our natural resources to maintain the ecological balance of nature. For economic and social development of our country, sustainable use of natural resources is must for us and for our future generation too, so that they may take benefit of it.

### **Sustainable Development**

Sustainable development is must to meet the needs of the present without compromising the ability of future generation to meet their own needs. Sustainable development is the best way to save our environment Keeping in mind the development, sustainable development should be done by adopting the given techniques:-

- (i) Three R's i.e. Reduce, Reuse and Recycle.
- (ii) Environmental education/awareness.
- (iii) Resource utilization as per carrying capacity.
- (iv) Environmental policies and law.

Overall we can say that saving the environment from degradation is not the single handed phenomenon. Therefore to save our environment i.e. protecting ourselves from harmful effects, everybody should join hands and come together to protect our **MOTHER EARTH.**

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