

Environmental Degradation: Cause and Restorative Strategy-A Review

Kushal Thakur¹, Samil Ahmed Poswal², Neeraj Kanwar³

¹Department of Bio-Sciences (Zoology Division), ^{2,3}Department of Civil Engineering,

Career Point University, Hamirpur, Himachal Pradesh, India

Email: kushalthakur18@gmail.com, samilahmed44@gmail.com, neerajkanwar89@gmail.com

Abstract: Present world is facing the problem of environmental degradation which is arising due to many factors which include both traditional and modern hazards. It has become an uphill task to overcome these causes. This paper compiles different remedial strategies to control this degradation. It includes restoration remedies like scientific solid waste disposal, organic farming and use of vermin-compost etc.

Keywords: Deforestation Degradation, Overpopulation

Introduction: A key role of science is to maintain the quality of ecosystem. "An ecosystem is a self-regulating group of biotic communities of species interacting with one another and with their non-living environment exchanging energy and matter". All the biotic and abiotic things occurring naturally on earth consist the natural environment. Environment can be generally described as the physical surrounding and conditions affecting the lives of people and animals. So, any degradation in its quality will ultimately affect our health and quality of life. Environmental degradation is one of the largest threats that are being looked at in the world today. It occurs when natural resources are depleted and environment is compromised in the form of extinction of species, pollution in air, water and soil, and rapid growth in population. Environment is being degraded by certain human and natural causes which have been enlisted below:

Causes of Degradation: Deterioration or destruction of environment can occur in many ways which include:

- 1. Overpopulation:** This factor is more predominant in areas which have low levels of education and unawareness towards family planning. Rapid population growth puts strain on natural resources which results in degradation of our environment.
- 2. Vehicular Growth:** India has witnessed exponential growth in number of vehicles after 1981 which was steady until then.
- 3. Fossil fuel emission from power plants:** Fossil fuel based power plants emit contribute heavily to the production of smog. According to Central Electricity Authority (CEA), coal-powered thermal power plants account for 60.72% of India's total power generation as of Jan 2015.
- 4. Electromagnetic radiations:** The microwaves from cell phone towers can interfere with your body's own EMFs, causing a variety of potential health problems, including
- 5. headache, memory loss, cardiovascular stress, low sperm count, birth defects and cancer.**
- 6. Landfill:** Landfill sites are generally located near the city and pose problems like fly and mosquito breeding and also pollute the ground water due to the contamination by leachate.

7. Emission from Industries: Emission of pollutants from industries is a big cause for air, water and soil pollution.

8. Over-exploitation of Resources: Natural resources are being consumed rapidly at a rate higher than their rate of replenishment.

9. Deforestation: Deforestation is done at a high rate to meet the increased fuel requirements, spread of agriculture etc. During the last 8000 years about 45% of earth's original forest cover has disappeared.

10. Natural Causes: These include earthquakes, cyclones, volcanic eruptions, floods, drought and tsunami etc.

11. Other causes: Poverty, climate change, pollution, inadequate sanitation in the households, inadequate solid waste disposal, use of pesticides in agriculture fields are some of the miscellaneous causes of the degradation.

Effects of Environmental Degradation:

1. Economic losses: Degraded environment affects the tourism industry and which in turn affects the employment generation. We also have to spend a large pie of the budget on fighting the diseases posed by the pollution. The World Bank estimates that India loses around 3% of its GDP due to air pollution.

2. Loss of Biodiversity: Many of the species like Ganges Dolphin, Indian Bustard, Sangai Deer etc. are on the verge of extinction due to their habitat loss. The natural forests and grasslands, which were the natural homes of thousand species including wildlife species, are going cleared day by day into agriculture land, pastures and settlements or for development projects.

3. Effect on Human Health: Human health is badly affected by the environmental degradation. Areas exposed to toxic air can cause respiratory problems like pneumonia and asthma. Millions of people are known to have died of due to indirect effects of air pollution.

4. Aesthetics: A bad environment gives a very unpleasant look to our surrounding. It can be in the form of solid waste in our neighbourhood or in the form of loss of wildlife which includes many birds, colourful butterflies which have great aesthetic value for human beings.

5. Temperature Increase: According to an ongoing temperature analysis conducted by scientists at NASA's Goddard Institute for Space Studies (GISS), the average global temperature on Earth has increased by about 0.8° Celsius (1.4° Fahrenheit) since 1880. Two-thirds of the warming has occurred since 1975, at a rate of roughly 0.15-0.20°C per decade.

Restoration strategy for Environmental Degradation: Some of the restoration strategies have been discussed here below:

- 1. Public Awareness and Family planning:** People should be aware of and sensitive to environment and its problems. Education should impart in learner a value oriented thought to take care of environment. They should be encouraged to use the different spacing methods to help them with family planning.
- 2. Efficient Public Transport and e-vehicles:** Cities should develop an efficient public transport system and also encourage the use of electric vehicles by incentivising & some policy modifications which support use of electric vehicles.
- 3. Scientific Solid Waste Disposal:** Malpractice of disposing solid waste in landfill sites without scientific disposal should be stopped. Disposal of biodegradable and non-biodegradable waste should be done accordingly.
- 4. Conservation of Wildlife:** Wildlife conservation should be given top priority which can be both in-situ and ex-situ conservation. It will also help maintaining the aesthetics of the area, thus also benefitting us in economic terms as it will result in increased tourism. Projects focussing on specific endangered species should be encouraged.
- 5. Industrial Waste Management:** There should be a proper check on the industrial effluents which should be monitored periodically and heavy fines should be imposed on them if found guilty of environmental pollution.
- 6. Encouraging Organic Farming and Vermi-compost:** People should be aware about the benefits of

organic farming on human health and as well as soil fertility. Use of bio-insecticides instead of pesticides and vermi-compost in place of fertilizers.

References

- i. *India Leaps Ahead: Transformative Mobility Solutions for All*, NITI Aayog, **2017**
- ii. Kaushik A. and Kaushik C. P., *Perspectives in Environmental Studies* New Age International (P) Limited Publishers. **2012**.
- iii. Lim S. L., Wu T. Y., Lim P. N. and Shak K. P. Y., *The use of vermicompost in organic farming: overview, effects on soil and economics* Society of Chemical Industry, **2014**.
- iv. Sharma M. R., *An Introduction to Environmental Science* Satya Prakshan New Delhi. **2013**.
- v. *Study on Traffic and Transportation Policies and Strategies in Urban Areas in India*, Ministry of Urban Development Govt. of India. **2008**.
- vi. <https://www.conserve-energy-future.com/causes-and-effects-of-environmental-degradation.php>
- vii. <https://www.earthclipse.com/environment/causes-and-effects-environmental-degradation.html>
- viii. <https://earthobservatory.nasa.gov/Features/WorldOfChange/decadaltemp.php>
- ix. <https://www.safespaceprotection.com/emf-health-risks/emf-health-effects/cell-towers/>
- x. <http://www.walkthroughindia.com/wildlife/top-10-most-endangered-wild-animal-species-of-India>