

Environmental Degradation: Causes, Impacts and Mitigation

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Abstract - Degradation of the environment brought on by a variety of causes, including human activity, is known as environmental degradation. Factors including deforestation, pollution, population growth, and climate change are the causes of this deterioration. Wide-ranging effects of environmental degradation include biodiversity loss, air and water pollution, increased susceptibility to natural catastrophes, and harm to ecosystems, animals, and human well-being. It is essential to implement sustainable practices, lower greenhouse gas emissions, preserve natural ecosystems, and support conservation initiatives in order to lessen these problems. In order to ensure the long-term health and survival of our planet and its people, we must address environmental deterioration.

Keyword - Degradation, environmental

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INTRODUCTION

Pollution, animal extinction and biodiversity loss, deforestation and desertification, global warming, and many other problems are all included under the broad idea of environmental degradation. Environmental degradation refers to the deterioration of the environment caused by the loss of ecosystems, the extinction of species, and the depletion of resources including soil, water, and air. Any alteration or disruption to the surroundings that is seen to be harmful or unwanted is what it is characterized as. The United Nations High-level Panel on dangers, Challenges, and Change has officially identified 10 dangers, including environmental degradation. "The reduction of the environment's capacity to meet social and ecological objectives, and needs" is the definition of environmental degradation given in the UN International Strategy for Disaster loss. There are several forms of environmental deterioration. The state of the environment deteriorates when natural habitats are lost or natural resources are exhausted. Environmental protection and environmental resources management are two strategies used to address this issue.[1]

The environment is something we are very familiar with. It's everything that makes up our surroundings and affects our ability to live on the earth. Environmental degradation is a very serious problem worldwide which covers a variety of issues including pollution, biodiversity loss, and animal extinction, deforestation and desertification, global warming, and a lot more. The environmental degradation is deterioration of the environmental through depletion of

resources which includes all the biotic and abiotic element that form our surrounding that is air, water, soil, plant, animals, and all other living and non-living element of the planet of earth. Environmental degradation is also having a useful aspect, more new genes have been created, and some species have grown as someones have declined. For natural selection, species are constantly regenerating as the environment changes, and human activity is the main driver's power. Human is also a product of nature; this shift is to natural replacement. Most of the people about three-fourths of its population depends directly for their livelihood on activities based on natural resource and the remainder of the population relies on these resources directly for food, fuel, industrial output, and recreation. Most of the natural resources including the environment in India are in a serious state of degradation. The use of agriculture fertilizer is a major factor for the degradation of soil quality, soil erosion, salinity and general loss of fertility of agricultural land as well as the loss of the production of the quality crop. Similarly, groundwater aquifers are overexploited in many arid and semi-arid areas, surface water sources are highly polluted and consequently, water for drinking and irrigation is increasingly getting scarce and polluted. Fishery yields are declining, and air quality is deteriorating.[2]

Causes of environmental degradation

Human activity—modern urbanization, industry, population expansion, deforestation, etc.—as well as natural events—floods, typhoons, droughts, increasing temperatures, fires, etc.—are the main

causes of environmental degradation. The term "environmental pollution" describes the deterioration of natural resources' quantity and quality. The primary causes of environmental deterioration are various human activities. Airborne pollutants such as SO_x, NO_x, CO, and smoke are increased by automobiles and industry. Pollution of the air, water, soil, and sound has resulted from unplanned development and industry. The process of industrialization, urbanization, and sewage waste contributes to the contamination of water sources. Analogously, the air is contaminated by the smoke released by automobiles and industry, which also releases various dust particles, nitrogen oxide, carbon monoxide, and hydro fluorocarbons. Ever with the advent of tools and the formation of societies, humans have had a significant impact on the natural environment's development. [3]

Land degradation

Land degradation is a global issue that may result from both natural and artificial activity. The main cause of the ongoing deterioration of soil is human activity mixed with climate change. observed that changes in surface soil may alter the structure of plant patches and surface topographical characteristics. the soil erosion, wasteland formation, waterlogging, desalination, and deforestation. According to estimates from the FAO, over 2 billion people, or $\frac{3}{4}$ of the population living in developing nations at the time, relied on biomass for their daily energy needs.

Pollution

Air pollution refers to the discharge of hazardous pollutants (chemicals, poisonous gasses, particles, biological molecules, etc.) into the earth's atmosphere. These toxins may cause major health problems, and their effects are seen almost immediately. When harmful substances and particles are discharged into water systems including lakes, rivers, and oceans, this is known as water pollution. Human activities, such as sloppy sewage treatment and oil spills, are a major source of these pollutants. Pollution is a very important global issue, pollution resulted in the degradation of the quality of natural biotic and abiotic elements. Water contamination is a major issue all throughout the globe, but notably in developing nations. About 71% of the Earth's surface and subsurface was submerged. The groundwater shortage is particularly severe in the world's developing nations. Water is one of the most in-demand resources since it is essential to so many human activities, such as drinking, irrigation, leisure, and providing a home to economically significant fish populations. Polluted waterways are powerful agents of illnesses like cholera, typhoid, and TB, making them a major threat to human life whenever they are used as a source of drinking water or for other human domestic functions. According to Olaniran (1995), water pollution occurs when there are enough harmful substances (pollutants) in the water that it can no longer be used for human consumption. The introduction of contaminants into the environment is what we call

pollution. Humans are mostly to blame for the degradation of water quality. It's the end outcome of people's efforts to improve themselves. These may be categorized as human actions that contribute to environmental degradation. The majority of pollution is caused by human population increase, industrialization, and agricultural activities. Decomposers use dissolved oxygen (O₂) during respiration, lowering the Biological Oxygen Demand (BOD). River wildlife and vegetation undergo shifts and population declines as a result of suffocation-related deaths. [4]

Climate change Global warming which is sometimes referred to as climate change is the observed increase in the average temperature of the Earth's climate system the global surface temperature is anticipated to climb a further 0.3 to 1.7 °C in the lowest emissions scenario, and 2.6 to 4.8 °C in the highest emissions scenario. The "national science academies of the major industrialized nations" documented these excerpts. The effects of future climate change will vary greatly from one area to the next. Expected repercussions include a rise in global temperatures, increasing sea levels, deforestation, unbalanced climatic situation, altering precipitation, and extension of deserts. There are several ways in which global warming negatively affects human health and agricultural output. The rise in heat-related illnesses, civil strife, and the decline in economic resources as a result. The spread of mosquitoes and other disease-carrying insects to new warm-weather regions has a knock-on effect on human health because of the rise in cases of malaria, dengue, yellow fever, and viral encephalitis. Droughts, floods, and storms are becoming more common, and insect populations are growing, all of which have a negative impact on agricultural productivity and lead to food shortages.

Overpopulation Population expansion as a missing scientific topic undoubtedly contributes to the low level of public awareness and interest in this matter. Degradation of the natural world varies in severity from one place to the next. Growing populations place a pressure on the planet's resources, leading to environmental deterioration. Because of advancements in medicine, people are living longer and dying at a far lower rate. The need for basic necessities like food, clothing, and shelter naturally rises in tandem with a growing population. More land is required for farming and housing millions of people. [5]

Impact of environmental degradation

Human economic, technical, and institutional practices have degraded natural environments. When Earth's natural resources are used up, it is said to be in a state of degradation. The resources which are harmed include water, air and soil. Our native flora and fauna, animal populations, and microbes are all suffering because of the

deterioration. When individuals use up all of the available resources or release toxic substances into the air, it has a negative impact on our environment. Pollution, resource waste, and clearing of natural habitats all contribute to a world that is no longer habitable. Humans are negatively impacted when companies release dangerous chemicals and trash into water sources. In addition to human waste, pesticides and fertilizers may contaminate a region's water supply. The water supply is unsafe to drink. Degradation of our planet has far-reaching consequences for human health, including increased rates of disease and premature mortality. Beautiful places like coral reefs are being destroyed by human activities like dumping trash, using harmful chemicals, and overfishing. There are instances when the damage is too enormous to repair. We are destroying our world, with catastrophic results.[6]

- **Impact on human health**

Degradation of the natural world may have negative effects on human health. Pneumonia and asthma are only two of the respiratory illnesses that may be triggered by breathing hazardous air pollution. It is estimated that millions of lives have been lost owing to air pollution's secondary consequences.

- **Loss of biodiversity**

Biodiversity has a critical role in safeguarding water supplies, moderating temperature swings, reducing pollution loads, and recovering depleted nutrient levels. Major drivers of biodiversity loss include deforestation, global warming, overcrowding, and pollution.

- **Ozone layer depletion**

The ozone layer shields Earth from the sun's UV radiation. The depletion of the ozone layer is caused by the presence of chlorofluorocarbons and hydro chlorofluorocarbons in the atmosphere. Its depletion will cause it to release hazardous radiation toward Earth.

- **loss for the tourism industry**

The tourism sector, which depends on visitors for a living, may suffer greatly as a result of environmental degradation. Most visitors may be turned off by environmental degradation such as increasing air and water pollution, massive landfills, biodiversity loss, and loss of green cover.[7]

- **Economic impact**

Restoration of green cover, clean-up of landfills, and preservation of endangered species are all examples of how a country's economy may be impacted by the massive expense it may have to bear as a result of environmental deterioration. The decline in tourism might potentially have a negative effect on the

economy. As you can see, many factors influence our natural surroundings. Carelessness on our part may add to the global environmental damage that is already taking place. However, there is something we can do to put a stop to it and take care of the world we live in: we can educate the public about environmental issues so that they can better understand and protect the world around them, making it a better place for their children and future generations.[8]

MITIGATION MEASURES

There are actions that can be taken to slow environmental deterioration. Here are just a few examples:

- Purchase recycled products
- Conserve water
- Do not litter or throw waste into inappropriate places
- Conserve energy
- Join an awareness group
- Talk with others about the impacts of environmental degradation

In the current economic and social system, the damage we cause to the environment is not taken into account. Because of the lack of concern for the environment, "free" natural resources have been exploited to excess. Overproduction of cheap goods with short lifespans that are liberally discarded into the environment after use, followed by the purchase of new cheap goods that are subsequently discarded, and so on, has an impact on the planet's ability to restore its environmental services in a timely manner. As a species, we need to shift our current approach to nature. Mother Nature owes us nothing. There is no reason for us to try to "manage" or "control" it. As integral parts of the natural world, we were built from the start to coexist peacefully with it. Furthermore, we have no right to exploit and destroy it without considering the generations of people and animals that will come after us.[9-10]

CONCLUSION

The degradation of the environment is one of most urgent of environmental issues. Depending upon the harm caused, some environments may never recover. The plants and animals which inhabited these places are going to be lost forever. In order to reduce any future effects, developers, the construction industry, and resource managers must consider the long-term impacts of development on the environment. With sound planning, awareness among the public and community participation, future degradation of the environment can be prevented.

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