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Effect Of Pollution On Environment Degradation And Disaster Management In India

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Abstract

The basic thesis of growth is the economic growth of which is required for political, social and economic stability the quality environment normally assumes lower priority in planning proposals and long-term planning. Unlimited exploitation of nature by man disturbed the ecological balance between living and non-living components of the biosphere. The adverse conditions created by man himself threatened the survival not only of man himself but also other living organisms. Due to progress, industries, technology, chemicals, atomic energy, there are a number of industrial effluents and emissions of poisonous gases in the atmosphere and also added solid waste which has lowered the quality of environment. The pollution is a necessary evil for all development. Due to lack of development of culture of pollution control, there has resulted a heavy backlog of gaseous, liquid and solid pollution in our country. Thus, pollution control in our country is a recent environmental concern. There is a race in developed countries to exploit every bit of natural resources to convert them into goods for their use and comfort and to export them to other needy countries. The industrialized countries dump lot of materials in their environment which becomes polluted. The environmental pollution has lowered its quality.

Key Words: Environmental Degradation, Pollution, Institutional Failure, Conflicts, Energy.

Introduction

Environmental pollution and degradation are used interchangeably by most of the people because both are concerned with the lowering of the quality of environment. There are two aspects (i) lowering the quality of environment (ii) deterioration of the quality of environment. The deterioration of the environmental quality refer the magnitude or intensity of the area covered. Environmental pollution means lowering of the quality of environment means lowering of the quality of environment local caused by human activities for exploitation of resources. Environmental degradation means deteriorating the environmental quality at global, regional and local levels by both natural processes and human activities. The adverse changes by human activities in the environmental quality at local level is generally called pollution, but sometimes the effects of human activities are so wide that the environment is degraded at global and regional level as well. Rapid population growth in a country like India is threatening the environment through expansion and intensification of agriculture, uncontrolled growth of urbanization and industrialization and destruction of natural habitats (Ray and Ray, 2011).

Pollution is an undesirable change in the physical, chemical and biological characteristics of air, water and soil that may harmfully affect the life or create a potential health hazard for any living organism. Pollution is thus direct or indirect change in any component of the biosphere that is harmful to living organisms and man, affecting adversely to the industrial progress, cultural and natural resources or general environment. Mankind is becoming ever more susceptible to natural disasters, largely as a consequence of population growth and globalization (Herbert et al., 2006).

Meaning of Pollutants: Any substance which causes lowering the quality of environment or pollution is called pollutant. A pollutant may be defined as any solid liquid or gaseous substance present in such a concentration that may have adverse harmful effects or may be injurious to the environment. Pollutants are the residues of things we make use or throw away. The rivers are polluted by wastes from factories, air, by gases, thermal power plants etc. In fact, in countries where there have been the greatest technical and industrial advances, the worst pollution occurs

Review of Literature

Every human society, be it rural, urban, industrial and most technologically advanced society dispose of certain kinds of by products and waste products which are injected into the biosphere in great quantities and they affect the normal functioning of ecosystems and have an adverse effect on plants, animals and man are called pollutants:- Climate change and disasters are fast emerging as the most significant challenges of the 21st century as global risks with impacts for beyond just the environment and implications on national security and development (Sajimon, 2010).

Environmental Pollutants: The following are the main pollutants which pollute our environment or our air, water and land

1. Deposited matter- dust, smoke, tar, grit etc.

2. Gases- Nitrogen, Carbon Mono oxide, Sulphur, Oxides

3. Solid waste

4. Radioactive waste

5. Noise

6. Complex organic substance- ether, acetic acid, benzene etc.

7. Metals

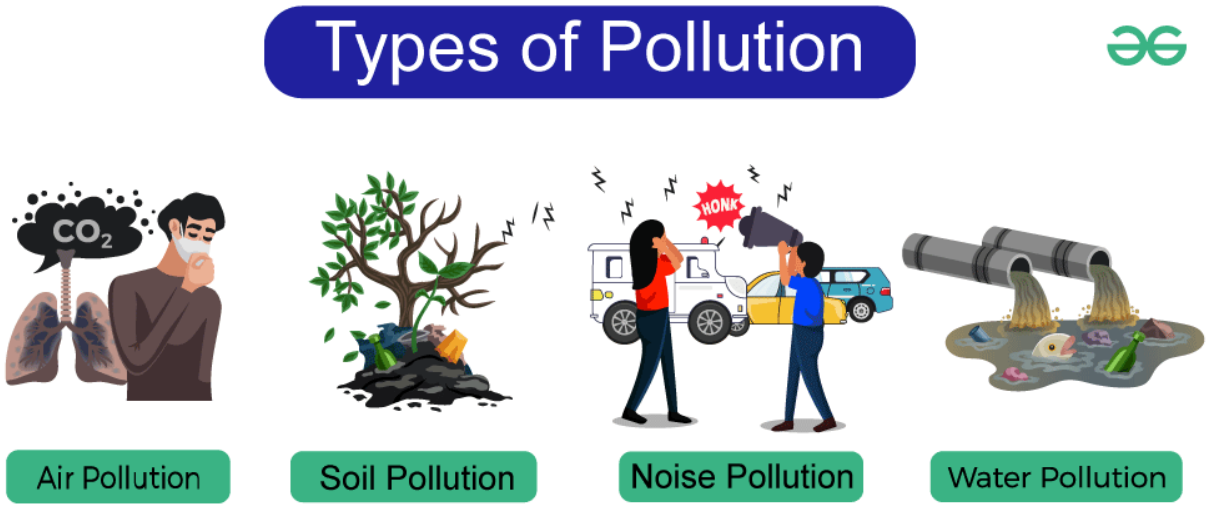
8. Fluorides

9. Photo Chemical Oxidants

10. Agrochemicals- Fungicides and Fertilizers

Types of Pollution

Pollution refers to the introduction of harmful contaminants into the natural environment, with the primary types being air, water, soil, and noise pollution. Other significant forms include light, thermal, radioactive, plastic, and visual pollution. These contaminants damage ecosystems, threaten human health, and disrupt natural habitats, primarily caused by industrial emissions, agricultural runoff, and waste.



- **Air Pollution:** Contamination of the atmosphere by gases (sulfur dioxide, carbon monoxide) and particulates (smoke, dust) from factories and vehicles.

- **Water Pollution:** Contamination of water bodies like oceans, rivers, and groundwater by industrial waste, sewage, and plastic.

- **Soil/Land Pollution:** Degradation of the earth's surface due to improper waste disposal, agricultural chemicals, and littering.

- **Noise Pollution:** Excessive, unpleasant sound from traffic, industry, or construction that disturbs humans and wildlife.

- **Light Pollution:** Excessive, misdirected artificial light in urban areas that disrupts natural light cycles and nocturnal animals.

- **Thermal Pollution:** The degradation of water quality caused by changing its temperature, usually by industries using water as a coolant.

- **Radioactive Pollution:** Rare but deadly contamination from nuclear accidents or improper disposal of radioactive waste.

- **Plastic Pollution:** Accumulation of plastic products, causing long-term damage to ecosystems, particularly marine life.

Environmental Degradation

Environmental degradation is the deterioration of the environment through the depletion of resources (air, water, soil), destruction of ecosystems, and extinction of wildlife. Driven primarily by human activities like industrialization, deforestation, and pollution, it creates a downward cycle of damage that reduces biodiversity, threatens human health, and causes significant ecological, social, and economic decline.

Environmental Degradation:

- **Causes:** Driven by rapid population growth, industrialization, agricultural intensification, urbanization, and overconsumption of natural resources.

- **Types:** Includes air pollution, water contamination, soil erosion, deforestation, and habitat destruction.

- **Effects:** Leads to loss of biodiversity, climate change, reduced agricultural productivity, and health issues due to poor air/water quality.

- **Solutions:** Requires sustainable practices, such as conservation, renewable energy adoption, waste reduction, and strict environmental regulations.

Causes and Consequences

- **Human Impact:** Unsustainable extraction of resources (minerals, fossil fuels) beyond their capacity to regenerate disrupts ecological balance.
- **Pollution & Waste:** The introduction of harmful, foreign substances into the environment creates toxic conditions for organisms.
- **Ecological Breakdown:** Deforestation and habitat destruction lead to the extinction of species and loss of ecosystem services.
- **Health and Society:** Deteriorating conditions affect human livelihoods, decrease life quality, and raise the risk of natural disasters.

Disaster Management

Disaster management is the strategic process of planning, coordinating, and implementing measures to prevent, mitigate, prepare for, respond to, and recover from natural or man-made disasters. Its core objective is to minimize the impact on human life, property, and the environment through a structured cycle of proactive risk reduction and rapid, effective emergency response.

Phases of Disaster Management

- **Mitigation:** Proactive measures taken to reduce or eliminate the long-term risks and impacts of hazards (e.g., land-use planning, building codes).
- **Preparedness:** Activities designed to prepare for an emergency, such as developing emergency plans, conducting training, and establishing early warning systems.
- **Response:** Immediate actions taken during or immediately after a disaster to save lives and prevent further damage, including search, rescue, and emergency relief.
- **Recovery:** Long-term actions taken to restore essential services, rehabilitate affected communities, and reconstruct infrastructure, often using the "build back better" approach.

CONCLUSION

Disaster management should be included in the curriculum of schools and colleges to inculcate the culture of safety and prevention among the children. Setting up of suitable early warning systems is probably the best intervention. System for weather forecasting, though have improved over the last five years, still needs higher investments, equipments and man power. It should be possible to warn communities in any part of the country about extreme weather conditions substantially well in advance to enable them to save the lives and property. In the event of actual disasters, the community, if well aware of the preventive actions it is required to take can substantially reduce the damage caused by the disaster.

Awareness and training of the community is particularly useful in areas that are prone to frequent disasters.

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