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Economic Growth and Natural Resources Degradation: Impact and Preventive Measures

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Abstract: *Economic growth refers to increase in income, per capita income and standard of living of masses to increase the pace of economic growth, viz. industrialization, mining, transportation, construction, urbanization etc. Economic expansion increases demand for production, consumptions and industrialization lay excessive stress on depletion of natural resources. Industrialization result in air pollution due to release of harmful gases in the environment; water pollution as industrial waste is released in rivers; noise pollution as industrial machines make excessive noise. In this way, although industrialization has contributed to economic growth, but at the same time, it has caused environmental pollution. Everybody in this world is concerned with the rate at which environment and life sustaining facilities are being degraded. Some people believe that industrialization is one of the basic causes of degradation of natural resources. In this context present paper will highlights, various forms and effects of environmental and natural resources degradation, with special focus on discussion about various measures taken to curb pollution made by industries , also offer some suggestions for environment protection.*

Key word*: Economic growth, Environment, Degradation, Pollution, Industrialization.*

1.INTRODUCTION

The new economic policies were introduced in the year 1991. The main objective of the new economic policy is to accelerate the growth rate of industrial production by adopting liberal industrial policy, privatization and globalization of the industries. It has promoted the rate of industrial development. But Industrialization to achieve economic development has resulted in global environmental degradation. Rapid industrialization in India has not only led to the economic development but On the other hand it has increased pollution of land, water, noise and air. Environment degradation causes health hazards like respiratory problem, skin diseases, diarrhea, etc. it will also adversely affect the quality of life of future generations. Since the advent of industrial and technological revolutions, economic indicators have been considered as the principal criteria for measuring progress. The industrial and technological progress however, has been accompanied by a growing negative impact on the environment in terms of its pollution and degradation. Industrialization carries with it the seeds of environmental damage, assisted and abetted by both needs and greed of man. Activities such as manufacturing, processing, transportation and consumption not only deplete the stock of natural resources but also add stress to the environmental system by accumulating the stock of wastes. The productivity of the industries, however, depends on the supply and quality of natural and environmental resources. While water, soil, air, forest and fishery resources are productive assets, the pollution of water, air, atmosphere and noise are the by-products of economic development, particularly industrialization and urbanization. "Green house effects", "global warming" and "acid precipitation" are cases in point. Pollution is an "external cost" (sometimes called a "spill-over cost" or a "neighborhood cost"). Untreated or improperly treated waste becomes pollution, increasing not only private costs but also social costs. Environmental degradation often tends to become irreversible and imposes damaging costs on the economy resulting in output and human losses, loss of labour productivity from ill- health and loss of crop output. The ecological and social costs of such unrestrained pollution and degradation have put a big question mark on the perceived notion of industrialization as a way of economic development. Industrialization is on the increase, which of course is necessary for the progress of human civilization but so is the environmental pollution due to emissions and waste generated from these industries. The industrial pollution due to its nature has the potential to cause irreversible reactions in the environment and hence is posing a major threat to our very existence. Since the carrying capacity of the

environment is not unlimited and some areas or ecosystems are more susceptible to adverse environmental impacts than others, unplanned and haphazard industrialization has substantially increased the risk to the environment.

2.OBJECTIVES AND METHODOLOGY

Objectives of the present paper are as follows:
1. To study the forms and effects of environmental and natural resources degradation.
2. To study the various measures taken to curb pollution made by industries.
3 To offer useful suggestions in the light of findings

To achieve the objectives, the present paper is based on the secondary data collected from different websites, research papers, books and magazines.

3. FORMS OF NATURAL RESOURCES DEGRADATION

- **Air pollution**

Main sources of air pollution are industrial emission. On account of industries, many toxic pollution like sulphur dioxide, hydrogen sulphide, ammonia, etc., continue to add into the air. Besides, air pollution takes place when suspended particulate matter (SPM) and impure or poisonous gases are released in the air. Smoke, ash and dust are the main components of SPM, Chemical, leather, paper and sugar industries generate foul smell. Workers in textile industry are susceptible to asthma and those in cement industry are vulnerable to tuberculosis (TB)

- **Water Pollution**

Industry waste is openly thrown in the water of rivers and lakes. This waste mixed water carries several pollutants. Many toxic chemicals get mixed up in the running water. Often the fish also suffer from many diseases; Consumption of these fish as food may prove hazardous, in the form of industrial waste, many metallic contents in the water such as mercury, chromium, lead, etc. may endanger the entire marine life.

- **Problem of Solid Waste**

Rising population and increased industrial production have led to manifold rise in the volume of solid waste. For instance, as the standard of living of the society improves, plastic cans, bottles, bags, paper envelopes, used tyres, rotten vegetables, old shoes or chappals, egg shells etc. replace leaves flowers, vegetation like bio-degradable organic material in large quantity. If this waste is not carefully disposed of, it attracts files, mosquitoes, rodents, etc. that in turn, spread several diseases. Land, soil and water of the concerned area are degraded.

- **Deforestation**

Deforestation refers to falling of trees. Increased consumption of timber and pulp for building houses and industries are badly affect environment

- **Noise pollution**

The problem of noise pollution accompanied the advent of industrial age in the world but its serious consequences have come to fore now. All those activities which produce sound of intensity higher than 50-55 Db level are treated as source of noise pollution. Heavy machine operating in workshops, blasts in mines contribute to noise pollution. Loss of hearing capacity in industrial countries is mainly due to this factor

- **Disposal of reactive waste and danger of radiation**

Nuclear materials like uranium and plutonium are being used by nuclear power plants for generating electricity .however, the problem is how to dispose of the waste produced by it. These waste have low, medium and high levels. High level waste emits radiation in large volume and so cannot be released in the environment.

- **Climate change**

Industrial activities, especially combustion of fossil fuel, produce carbon monoxide and carbon dioxide on a large scale. These gases produce heat and form a shield in the upper atmosphere. Earth gets heat from the sun. It absorbs a part of it and remaining part is reflected back into space. These harmful gases effectively reduce that part of heat which is generally reflected back. It is called greenhouse effect. As a result of it, average global temperature rises.

- **Reduction in cultivation land**: Due to expanding roads requires land acquisition which may result reduction in cultivation land and increase in inflation rate of food grains.

- **Soil degradation**: cutting of trees for constructions can lead to soil erosions may result land slides

4. Effects of Environmental Degradation on Economic Growth

- **Impact on Human Health:** Human health might be at the receiving end as a result of the environmental degradation. Areas exposed to toxic air pollutants can cause respiratory problems like pneumonia and asthma. Millions of people are known to have died of due to indirect effects of air pollution.
- **Loss of Biodiversity:** Biodiversity is important for maintaining balance of the ecosystem in the form of combating pollution, restoring nutrients, protecting water sources and stabilizing climate. Deforestation, global warming, overpopulation and pollution are few of the major causes for loss of biodiversity.
- **Ozone Layer Depletion:** Ozone layer is responsible for protecting earth from harmful ultraviolet rays. The presence of chlorofluorocarbons, hydro chlorofluorocarbons in the atmosphere is causing the ozone layer to deplete. As it will deplete, it will emit harmful radiations back to the earth.
- **Loss for Tourism Industry:** The deterioration of environment can be a huge setback for tourism industry that rely on tourists for their daily livelihood. Environmental damage in the form of loss of green cover, loss of biodiversity, huge landfills, increased air and water pollution can be a big turn off for most of the tourists.
- **Economic Impact:** The huge cost that a country may have to borne due to environmental degradation can have big economic impact in terms of restoration of green cover, cleaning up of landfills and protection of endangered species. The economic impact can also be in terms of loss of tourism industry. Degradation of these resources can lead to increased costs for water treatment, disaster mitigation, and food production. Environmental degradation can lead to economic downturns, particularly in sectors reliant on natural resources, such as agriculture, forestry, and fisheries. Pollution and environmental degradation can lead to health issues, resulting in higher healthcare costs and reduced workforce productivity. Significantly impacting global GDP. Environmental degradation negatively impacts economic growth by reducing productivity in various sectors. Environmental degradation poses significant risks to economic stability and growth. It affects productivity, public health, and resource availability, ultimately threatening sustainable development

5. Environmental Preservation, and Economic Growth

Economic growth has long been considered the primary yardstick of national progress. More output, more jobs, higher incomes – these are the goals that governments pursue. But growth, as it has been practiced for most of modern history, has come with a significant environmental bill: more energy burned, more resources extracted, more pollution released. It requires deliberate, coordinated policy action across three interconnected areas: resource efficiency, circular economy principles, and the energy transition to renewable. The goal of sustainable development is to achieve a balance between social progress, environmental preservation, and economic growth. This usually means putting policies and procedures into place that improve resource efficiency, lower pollution, and safeguard natural ecosystems to ensure sustainable economic growth and resilience against future environmental challenges.

6. Prevention and Control of Environmental Degradation

- An increasing trend of noise pollution has been observed in the major cities of the country. To regulate and control noise pollution, the Government has issued various notifications under the Environment (Protection) Act, 1986.
- Air pollution tolerance index established.
- Use of pollution control equipment.
- Using less polluting material in manufacturing.
- Implementing effectively the solid waste management rules,2016
- Encouraging industries to utilize recycled /treated water to the extent possible and ensuring zero discharge of untreated effluents from industrial units.
- Ensuring Aviral and nirmal dhara in the ganga, Yamuna,and other rivers
- Increasing the forest cover to33.3 percent of the geographical area, as envisaged in the national forest policy, 1988.
- Introduction of cleaner gaseous fuels like CNG, LPG etc. and ethanol blending.
- Setting up of monitoring network for assessment of ambient air quality.
- Banning of burning of biomass.
- Issuance of directions under Air (prevention and control of pollution) Act,1981.

- High rate of water conservation fees are expected to discourage setting up of new industries in 0ver-exploited and critical areas as well as a deterrent to large scale ground water extraction by industries.
- On August 8, 2018 the Centre banned 18 pesticides citing the harmful effects they could cause to humans and animals.
- Gearing up to reduce pollution - related woes in the capital city, the Delhi government has mandated the use of only cleaner fuels and barred all toxic and polluting fuels.
- The national clean energy fund created in2010-2011using the carbon tax-clean energy cess for funding research and innovative projects.
- Plastic waste management rules, 2016 have been framed.
- Namami gange programme launched in 2015.
- The Centre has fixed a target of reducing air pollution by 20-30% from the current level in 102 cities across the country by 2024.

7. FINDINGS AND SUGGESTIONS

Rapid industrialization in India has not only led to the economic development but On the other hand it has increased pollution of land, water, noise and air. Environment degradation causes health hazards like respiratory problem, skin diseases, diarrhea, etc. it will also adversely affect the quality of life of future generations. In the light of above discussion some suggestions are; this problem cannot be solved simply by making laws, but such laws should implement seriously. Besides government measures, people co-operation should also be sought by making them conscious to protect the environment, maximum a forestation should be undertaken. Ban on use of polythine and municipalities should impose industrial pollution tax. The goal of sustainable development can be achieved by maintaining balance between social progress, environmental preservation, and economic growth

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