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Impact of Population Growth on Environment

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Abstract:

In a nation like India, rapid population growth is endangering the environment through increased agricultural production, unchecked urbanization and industrialization, and devastation of natural habitats. The environment is under extreme stress due to the fast expansion in human population. Developing nations face mounting pressure to compete economically, and their industrial breakthroughs are also harmful, even as developed nations persist in polluting the environment and depleting its resources. Increased demand for food, clothing, and housing results from rapid population increase. Rapid population expansion is a major issue in India. It has a terrible impact on the environment. Rapid population expansion or overcrowding has a negative impact on natural resources. The issue of global warming is one of the most significant environmental repercussions of human population expansion. There are experts who worry that future catastrophic weather events and increasing sea levels will result from global warming. At an alarming rate, forests are being destroyed to support the expanding population. Degradation of the land is partly caused by population strain on arable land.

Key words: environment, global warming, population growth, India, and rising sea levels.

Introduction

Indian with 1.34 billion people living there as of 2016, India is the second most populous nation in the world, behind China (Indiaonlinepages.com). India's chances of achieving a decent quality of life were diminished by population growth, notwithstanding the country's strong agricultural sector and improved farming practices. The problem of sustainable development is posed by the growing population and the deteriorating environment. The process of socio-economic development can be accelerated or hindered by the presence or lack of advantageous natural resources. Due to the inability of the population to boost food demand significantly, the expanding population placed enormous pressure on land intensification at the expense of forests and grazing areas. Therefore, horizontal land extension has limited potential and is mostly dependent on vertical improvement, which is backed by advancements in agricultural technology, such as HYV seeds, fertilizers, pesticides, herbicides, and agricultural tools. One of the significant effects of population growth is poverty, and the way that people live contributes significantly to environmental degradation. People living below the poverty line experience push and pull factors due to unequal resource distribution and restricted opportunities, which in turn causes the population density to increase and the environment to be controlled on many levels.

Objective:

Objectives for this article are as follows:

- The aim of this study is to investigate how population expansion affects several aspects of the environment that are continuously deteriorating in India.
- Talk about potential solutions or actions to deal with such difficulties.
- To comprehend the impact of fast population growth on the ecosystems.
- We debate several suggestions and chat about the environment's helplessness.

Environmental difficulties

In India, there are numerous severe environmental issues that are a result of both economic growth and population increase. These include land pressure, degraded land and soil, forests, loss of biodiversity and habitat, increased energy demand, altered consumption patterns, air pollution, climate change and global warming, water scarcity, and water pollution.

Global warming and climate change:

Burning fossil fuels has increased the amount of carbon dioxide gas released into the atmosphere. Since it is a greenhouse gas (GHG), rising atmospheric concentrations have raised temperatures by trapping heat radiation, which has led to the green house effect, which has resulted in climate change and global warming. The melting of the polar ice caps due to global warming raises sea levels, which in turn causes flooding and submerges coastal areas.

One of the biggest risks facing the earth is global climate change. Scientists and governments alike concur that the issue is genuine and grave. Climate scientists agree that throughout the past 140 years, the average global temperature has increased by roughly 1F (0.4C–0.8C). The last five years have been among the seven hottest on record, with the 1990s being the hottest decade of the millennium. Thirty years on, spring has arrived about fifteen days earlier. In the course of a human lifetime, the climate, if it changes at all, changes so slowly that the differences are not noticeable. Scientists realized that a significant portion of the Northern Hemisphere had formerly been covered by enormous ice sheets by gazing into the distant past. But the Ice Age had been an aberration that occurred tens of thousands of years ago. The IPCC predicts that by 2030 to 2050, the Middle East's temperature will rise by one to two degrees Celsius.

Land Degradation:

Farming activities are the source of direct environmental effects of agricultural development since they lead to nutrient loss, soil erosion, and land salivation. One of the main ways that pesticides and fertilizers contaminate water bodies is by leaching. In particular, salivations, alkalization, and water logging are caused by intensive farming and irrigation. It is clear that the majority of the nation's land is deteriorating, which is negatively impacting the economy's base of productive resources. The amount of land in India thought to be impacted by soil erosion and degradation varies from state to state, ranging from 0.1 percent in Goa to 21.6 percent in Rajasthan. Soil erosion leads to a significant loss of nutrients in suspension or solution, which are transferred from one

location to another and thus cause nutrient enrichment or depletion. Together with the loss of nutrients from the top soil, the land is degraded by the formation of ravines and gullies, rendering it unusable for agricultural cultivation.

Deforestation:

In order to accommodate increased agricultural production and other demands of a burgeoning population, forests must be destroyed. It causes unpredictable rainfall and drought-like conditions, destroys ecological equilibrium, and causes soil erosion. Because of the need for housing, agriculture, animal feed, building materials, and a small amount of industry, the majority of the area's vegetation cover is extremely low and gradually losing density. The Earth's rising temperature is caused by an increase in CO2, which also erodes soil, puts some wild ecosystems in grave danger, and causes flooding.

Pollution:

High levels of air, soil, water, and noise pollution are caused by population pressure. It's due to over consumption and careless exploitation of the environment's resources. These natural resources are further threatened by pollution-related ailments such as skin and lung cancers, respiratory disorders, and water-borne illnesses, which pose a threat to human life.

Materials that are deemed useless and disposed of as trash are known as solid wastes. These include newspapers, water supply and waste treatment facilities, eutrophication prevention facilities, air pollution control facilities, pathological wastes, and household waste. Cans, bottles, broken glass, polythene bags, plastic containers, ashes, and household waste of various kinds.

Over the past ten years, there has been a concerning increase in urban air pollution in India. Growing industrialization, rising vehicle pollution, industrial emissions, car exhaust, and the burning of fossil fuels are the main causes of the deterioration of urban air quality. These factors cause thousands of deaths as well as many more suffering from respiratory, heart, and lung ailments. The majority of India's major cities have seen an increase in outdoor air pollution due to factors like population growth, increasing energy generation, industrialization, and increased automobile use.

Biodiversity destruction:

Deforestation alters the ecological balance by causing the habitat of wildlife to be destroyed and biodiversity to be lost. It causes the ecosystem to collapse, the breakdown of food webs and chains, and ultimately poses a threat to human survival on Earth.

Water scarcity:

The global population boom has raised demand for clean, drinkable water. Water scarcity could spark a third world war.

PREVENTIONS

- It seems clear from the different ways that population increase is affecting the ecosystem that protecting the environment must become a major concern if humans are to continue to survive on Earth.
- The prevention and cleanup of pollution, as well as the introduction of new technologies and economic and legal measures, are just a few of the steps that must be taken in order to protect the environment.
- To reduce air pollution, both therapeutic and preventive interventions are required. For individuals to become conscious of environmental protection, more emphasis should be placed on mandatory environmental education at the school level. It is encouraged for the environment to put up serious effort to solve environmental issues. The government shouldn't be the only entity responsible for environmental protection; local leaders and citizens should also be urged to make concerted efforts to end environmental issues.
- Additionally, national efforts to reduce air pollution should be stepped up.
- Wastewater treatment plants should be built in accordance with the demands of the moment, and its use ought to be promoted.
- Furthermore, in order to avoid contaminating ground water, landfills must be carefully managed.

Conclusion

It is incorrect to think of the environment as a place where waste from homes, businesses, and other sources can be dumped or as a free supply of environmental benefits and services. In order to maintain the health and standard of living of both the current and future generations, environmental protection is imperative.

Without population control, the Earth's ecology could be destroyed since it is limited. The existing state of affairs, which includes the declining amount of cropland, the degradation of the ozone layer, the growth in deforestation and desertification, and the greenhouse effect, needs to be corrected immediately. It should be understood that while population control won't solve every issue raised above, it will undoubtedly buy more time for solutions. Furthermore, population control lessens environmental alienation. Alternatively, allowing the population to continue growing would be detrimental to the ecosystem. Overpopulation is detrimental to all living things, including humans, animals, land, and water.

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