

# IMPACT OF POPULATION ON DEGRADATION OF ENVIRONMENT

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## ABSTRACT

*Environmental degradation is the disintegration of the earth or deterioration of the environment through consumption of assets, for example, air, water and soil; the destruction of environments and the eradication of wildlife. Environmental degradation may be driven by many factors including economic growth, population growth, urbanization, industrialization, intensification of agriculture, rising energy use and transportation. Poverty still remains a problem at the root of several environmental problems. The present paper examined the relationship of population to the environment and with growing population, poverty and urbanization the environment is degrading. The rapid population growth and economic development in country are degrading the environment through the uncontrolled growth of urbanization and industrialization, expansion and intensification of agriculture, and the destruction of natural habitats. One of the major causes of environmental degradation in India could be attributed to rapid growth of population, which is adversely affecting the natural resources and environment. The three fundamental demographic factors of births, deaths and migration produce changes in population size. It is estimated that the country's population will increase to 1.26 billion by the year 2016. The projected population indicates that India will be a first most populous country in the world and China will be second in 2050 (Population Reference Bureau, 2001). The increase of population has been tending towards alarming situation. India is having 18 percent of the world's population on 2.4 percent of its land area has great deal of pressure on its all natural resources. Water shortages, soil exhaustion, deforestation, air and water pollution afflicts many areas. If the world population continues to multiply, the impact on environment could be devastating.*

**KEYWORDS:** Environment, Climate change, Population growth, degradation

## INTRODUCTION

Commonly environment means the surroundings in which we live and it denotes all the conditions and circumstances and the living and non living things around an organism, which affect its life. But the environment which we are trying to understand is classified on the basis of the process of its creation or evolution. Based on this, environment falls into three main categories: natural environment, human-made and social environment.

## NATURAL ENVIRONMENT

It includes all living and non-living things that occur naturally on Earth. It comprises the nature of the living space like land or sea, that is, it may be soil or water.

## HUMAN MADE ENVIRONMENT:

On the other hand, human-made environment includes all those things which are created by humans for their use. These things range from the large-scale civic surroundings to personal places. For example, houses, roads, schools, hospitals, railway lines, bridges and parks are components of human-made environment.

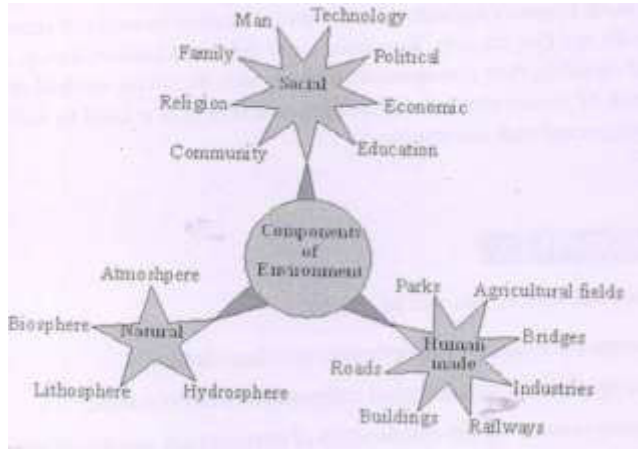
## SOCIAL ENVIRONMENT

There is yet another kind of environment which plays an important role in the living conditions of human beings. This is called the social environment. Social environment includes cultural norms and values, the culture that individuals live in, and social, political, economic and religious institutions with which they interact.

As the 21st century begins, growing number of people and rising levels of consumption per capita are depleting natural resources and degrading the environment. The rapid increase of human numbers combines with desperate poverty and rising levels of consumption are depleting natural resources on which the livelihood of present and future generations depends. Poverty is amongst the consequences of population growth and its life style play major role in depleting the environment either its fuel demands for cooking or for earning livelihood for their survival. The unequal distribution of resources and limited opportunities cause push and pull factor for people living below poverty line that in turn overburdened the population density in urban areas and environment get manipulated by manifolds, consequently, urban slums are developed in urban areas. The growing trends of population and consequent demand for food, energy, and housing have considerably altered land-use practices and severely degraded India's forest vis-à-vis environment also. Decades of economic expansion and population growth have

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degraded its land, air and water. The present paper examines the relationship of man to the environment and with growing population, poverty and urbanization the environment is degrading.



### AIM AND OBJECTIVE

The aim of this paper is to examine impact of population growth on various facets of environment which is being degraded, every now and then, gradually in India. Population growth and economic development are causing several serious environmental problems in India. These include pressure on land, deforestation and water scarcity and water pollution.

### ENVIRONMENTAL CHALLENGES

Population growth and economic development are contributing too many serious environmental problems in India. These include pressure on land, land/soil degradation, forests, habitat destruction and loss of biodiversity, changing consumption pattern, rising demand for energy, air pollution, global warming and climate change and water scarcity and water pollution.

### RISING DEMANDS FOR ENERGY DUE TO POLUTION GROWTH

The environmental effects due to increasing consumption levels of fuels like coal; lignite, oil and nuclear etc. are of growing concern to various researchers. The combustion of these fuels in industries has been a major source of pollution. Coal production through open cast mining; its supply to and consumption in power stations and industrial boilers leads to particulate and gaseous pollution, which can cause pneumoconiosis, bronchitis and respiratory diseases. Energy production and consumption has increased steadily in India since 1950 onwards. The production of coal and lignite has increased from 32.2 million tons in 1950-51 to 313.70 million tons in 2000-2001, an increase of 9.74 times. The production of petroleum products registered an increase of 29 times, from 3.3

million tons in 1950-51 to 95.6 million tons in 2000-2001. The bulk of commercial energy comes from the burning of fossil fuels viz. coal and lignite in solid form, petroleum in liquid form and gas in gaseous form. In addition to emission of greenhouse gases, the burning of fossil fuels has led to several ecological problems and associated with health problems like cancer risk, respiratory diseases and other health problems. Burning of traditional fuel adds a large amount of carbon-dioxide into atmosphere and increases air pollution.

### EFFECT OF GROWING POPULATION : GLOBAL WARMING

Due to growth of population everyone needs space/land to stay to work for industrialization and urbanization. Therefore deforestation is required. They need power so some hydro plant is needed and hence river is converted into dam. These several changes in nature, planet is warming, from North Pole to South Pole, and everywhere in between. Globally, the mercury is already up more than 0.8 degree Celsius, and even more in sensitive Polar Regions. Due to increase in use of plant, AC, Car, industries the carbon dioxide is generated more and more. The buildup of carbon dioxide in the atmosphere, mainly from our fossil fuel emissions, is the most significant human cause of global warming. Carbon dioxide is released every time we burn something, be it a car, airplane or coal plant. As the population grows, these consumptions will be more and more. We are currently destroying some of the best known mechanisms for storing those carbon-- plants. Plants, Trees and Oceans are main absorber of carbon dioxide. Due to deforestation trees are no longer absorbing carbon dioxide and the oceans are no longer able to store carbon as they have in the past. The ocean is a huge carbon sink, holding about 50 times as much carbon as the atmosphere.. The tiny plants of the ocean, the very bottom of that vast watery food chain, are suffering from the effects of global warming, which means they are becoming less able to store carbon, further contributing to climate change. Nearly 80 percent of greenhouse gas emissions come from industrial activities including power generation; waste management, transport, and building operations, while 20 percent come from deforestation, according to the UNFCC.

### GLOBAL WARMING RESULTING CLIMATE CHANGE

The country's large population resulting fast increasing energy use plays an important and growing role in global warming. Global warming can have major physical, environmental and socioeconomic consequences, which can be both positive and negative. The estimation of these impacts is complex and marked with uncertainties. Climate change would cause changes in 14 precipitation patterns, ocean circulation and marine systems, soil moisture, water availability, and sea level rise. These would make an impact on agriculture, forestry and natural eco-systems like wetlands and fisheries. Also with rising

temperatures, and subsequent increasing heat stress and alternation in patterns of vector-borne diseases, the global population would be more vulnerable to health problems, causing disruptions in settlement patterns and large-scale migration. All these would have significant socio-economic consequences (Compendium of environment statistics, 2000).

### THE KYOTO PROTOCOL

The Kyoto Protocol is a legally binding emissions-reduction treaty created in 1997 in Kyoto, Japan. The Kyoto agreement aims to reduce global industrial greenhouse gas emissions by an average of 5 percent against 1990 levels over a five-year period—from 2008 to 2012. The Kyoto climate treaty, which went into force in 2005, was ratified by 185 nations but not the United States.

### COPENHAGEN SUMMIT, DECEMBER 2009 (COP15)

Between 10-18 December 2009 leaders and climate experts met at the ten-day UN Climate Change Conference.

With more than 85 world leaders participated, the Copenhagen climate conference could be the most important world summit since the end of World War II, according to the International Institute for Environment and Development, an independent research institute based in London.

The Copenhagen climate conference has four achievable goals, according to the UNFCCC:

1. Make clear how much developed countries, such as the U.S., Australia, and Japan, will limit their greenhouse gas emissions.
2. Determine how, and to what degree, developing countries, such as China, India, and Brazil, can limit their emissions without limiting economic growth.
3. Explore options for "stable and predictable financing" from developed countries that can help the developing world reduce greenhouse gas emissions and adapt to climate change.
4. Identify ways to ensure developing countries are treated as equal partners in decision-making, particularly when it comes to technology and finance.

### DEGRADATION OF LAND/ SOIL DUE TO POPULATION GROWTH

Direct impacts of agricultural development on the environment arise from farming activities, which contribute to soil erosion, land salivation and loss of nutrients. Leaching from extensive use of pesticides and fertilizers is an important source of contamination of water bodies. Intensive agriculture and irrigation contribute to land degradation particularly salivation, alkalization and water logging. It is evident that most of the land

in the country is degrading, thus affecting the productive resource base of the economy. The estimated area of land affected by soil erosion and land degradation in India varies state to state and it varies 0.1 percent in Goa to 21.6 percent in Rajasthan. Soil erosion results in huge loss of nutrients in suspension or solution, which are removed away from one place to another, thus causing depletion or enrichment of nutrients. Besides the loss of nutrients from top soil, there is also degradation through the creation of gullies and ravines, which make the land unsuitable for agricultural production.

### GROUND WATER RESOURCES, WATER SCARCITY AND WATER POLLUTION

Out of the total replenishable ground water; about 84 percent is made available for agriculture and livestock, the rest 16 percent is made available for domestic consumption, industrial use and power generation. The amount of water available per person has declined in recent decades primarily because of population growth and water scarcity is projected to worsen in the future. The water pollution in India comes from three main sources: domestic sewage, industrial effluents and run off from activities such as agriculture. The increasing river water pollution is the biggest threat to public health. The diseases commonly caused due to polluted water are cholera, diarrhea, hepatitis, typhoid amoebic and bacillary, dysentery, guinea worm, whereas scabies, leprosy, trachoma and conjucvitis are some of the diseases associated with water scarcity. All these could be attributed to the rapidly increasing population and lack of water resources. Inadequate access to safe drinking water and sanitation facilities leads to higher infant mortality and intestinal diseases.

### POPULATION GROWTH AND ENVIRONMENTAL DEGRADATION

Population is an important source of development, yet it is a major source of environmental degradation when it exceeds the threshold limits of the support systems. Unless the relationship between the multiplying population and the life support system can be stabilized, development programs, howsoever, innovative are not likely to yield desired results. Population impacts on the environment primarily through the use of natural resources and production of wastes and is associated with environmental stresses like loss of biodiversity, air and water pollution and increased pressure on arable land. 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.

### CONCLUSION

Environmental Law is deeply intertwined with Human Rights. There are two basic conceptions of environmental human rights in the current human rights system. The first is that the

right to a healthy or adequate environment is itself a human right. The second conception is the idea that environmental human rights can be derived from other human rights, usually - the right to life, the right to health, the right to private family life and the right to property. "Environment" includes water, air and land and the inter-relationship which exists among and between water, air and land, and human beings, other living creatures, plants, microorganism and property. Universal Declaration of Human Right (UDHR) was declared on 10<sup>th</sup> Dec 1948 by United Nation and 193 are the members and signatory of this right including India. It means India is agreed and bound to obey the measures of Human Right. But the situation of human rights in India is a complex one, because of the country's large size and tremendous diversity, its status as a developing country and a sovereign, secular, democratic republic. We should develop our self to protect environment, educate our new generation about the proper use of fossil fuel, plan to plant trees in our areas, protect trees from deforestation, and mass movement against industrialization and infrastructural development on the cost of deforestation. Global warming is global issue; we should participate in climate protection conferences and share our views in the interest of the society for the generation to come.

#### REFERENCES

- Brandon Carter and Kirsten Honmann, (1991-92), "*Valuing Environmental Costs in India: The Economy Wide Impact of Environment Degradation*", World Bank, mimeo
- Central Statistical Organization. 1971-2011. "*Statistical Abstract of India* ", Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- Central Bureau of Health Intelligence*, (1995 & 1996), Health Information of India, Ministry of Health and Family Welfare, Government of India, New Delhi.
- Central Statistical Organisation, (1999 & 2000), "*Compendium of Environment Statistics*", Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- Central Statistical Organisation, (1999), "*Statistical Abstract of India*", Ministry of Statistics and Programme Implementation, Government of India, New Delhi.
- Centre for Science and Environment, (1982), "*Citizen's Report The State of India's Environment*", New Delhi
- Department of Agriculture and Cooperation, (2002), "*Indian Agriculture in Brief*", Directorate of Economics and Statistics, Ministry of Agriculture, Government of India, New Delhi.
- Energy Information Administration, 2001, *International Energy Outlook*, U.S.
- Forest Survey of India*. 1999. The State of Forest Report, Ministry of Environment and Forests, Government of India, Dehradun.
- Government of India. 1999. "*Economic Survey: 1998-99*", Ministry of Finance, Economic Division, Government of India, New Delhi.
- Government of India, (1997), *Estimates of Poverty*, Planning Commission, Government of India: Press Information Bureau, March 1997, New Delhi
- Government of India, (1999), "*Economic Survey: 1998-99*", Ministry of Finance, Economic Division, New Delhi.
- Government of India, (2001), *The State of Forest Report, Ministry of Environment and Forests*, Forest Survey of India, Dehradun.
- Government of India, (2003), "*Economic Survey: 2002-2003*", Ministry of Finance, Economic Division, New Delhi.
- Government of India, (2003), *Basic Statistics on Indian Petroleum and Natural Gas*, Ministry of Petroleum and Natural Gas, New Delhi.
- International Institute for Population Sciences (IIPS) and ORC Macro, 2000, India: National Family Health Survey (NFHS-2), 1998-99, Mumbai, India.
- Mishra, V. K.; Retherford, R. D. and Kirk R. Smith, 1999, "Biomass cooking fuels and prevalence of tuberculosis in India", *International Journal of Infectious Diseases*, **3**, (3), 119-29.
- Population Reference Bureau (PRB), 2001, *World population data sheet*, Washington, D.C.
- Registrar General and Census Commissioner of India. 1961-1991. "*Population Totals*", Census of India. New Delhi: Government of India.
- Registrar General and Census Commissioner of India. 2011. "*Provisional Population Totals*", Rural-Urban Distribution of Population, Census of India, Paper 2 of 2011, New Delhi: Government of India.