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37. IMPACTS OF URBANIZATION ON ENVIRONMENT

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ABSTRACT

Urbanization refers to general increase in population and the amount of industrialization of a settlement. It includes increase in the number and extent of cities. It symbolizes the movement of people from rural to urban areas. Urbanization happens because of the increase in the extent and density of urban areas. Due to uncontrolled urbanization in India, environmental degradation has been occurring very rapidly and causing many problems like land insecurity, worsening water quality, excessive air pollution, noise and the problems of waste disposal. This paper emphasizes on the effect of urbanization on environmental components mainly climate, biosphere, land and water resources. A case study of urbanization in India and metropolitan cities have been carried out leading to conclude on the existing causes of damage to the environment due to urbanization and preventive measures to keep a check on them. Although it is impossible to restrict urbanization it has to be ensured that urbanization proceeds in the right path causing minimum impact on environment.

INTRODUCTION

Urbanization is a process that leads to the growth of cities due to industrialization and economic development, and that leads to urban-specific changes in specialization, labor division and human behaviors. The population is growing at the rate of about 17 million annually which means a staggering 45,000 births per day and 31 births per minutes. If the current trend continues, by the year 2050, India would have 1620 million populations. Due to uncontrolled urbanization in India, environmental degradation has been occurring very rapidly and causing many problems like shortages of housing, worsening water quality, excessive air pollution, noise, dust and heat, and the problems of disposal of solid wastes and hazardous wastes.

IMPACTS OF URBANIZATION

The most emerging issues are climate changes, freshwater scarcity, deforestation, and fresh water pollution and population growth. These problems are very complex and their interactions are hard to define. It is very important to examine problems through the

social-economic-cultural system.

IMPACTS ON THE ATMOSPHERE AND CLIMATE

The Creation of Heat Island

Materials like concrete, asphalt, bricks etc absorb and reflect energy differently than vegetation and soil. Cities remain warm in the night when the countryside has already cooled.

Changes in Air Quality

Human activities release a wide range of emissions into the environment including carbon dioxide, carbon monoxide, ozone, sulfur oxides, nitrogen oxides, lead, and many other pollutants.

POLLUTION

Pollutants are often dispersed across cities or concentrated in industrial areas or waste sites. Lead-based paint used on roads and highways and on buildings is one such example of a widely dispersed pollutant that found its way into soil.

IMPACTS ON THE HYDROSPHERE AND WATER RESOURCES

Flow of Water into Streams

Natural vegetation and undisturbed soil are replaced with concrete, asphalt, brick, and other impermeable surfaces. This means that, when it rains, water is less likely to be absorbed into the ground and, instead, flows directly into river channels.

Flow of Water through Streams

Higher, faster peak flows change streams channels that have evolved over centuries under natural conditions. Flooding can be a major problem as cities grow and stream channels attempt to keep up with these changes.

Degraded Water Quality

The water quality has degraded with time due to urbanization that ultimately leads to increased sedimentation there by also increasing the pollutant in run-off.

IMPACTS ON THE BIOSPHERE

Modification of Habitats

The fertilizers that spread across lawns find its way into water channels where it promotes the growth of plants at the expense of fish. The waste dumped into streams lowers oxygen levels during its decay and cause the die-off of plants and animals.

Destruction of Habitats

There is also complete eradication of habitats as

an outcome of urbanization and native species are pushed out of cities.

Creation of New Habitats

New habitats are also created for some native and non-native species. Cities also create habitats for some species considered pests, such as pigeons, sparrows, rats, mice, flies and mosquitoes. Urbanization has, for example, eliminated many bat colonies in caves, but has provided sites such as bridges for these species to nest.

GROWTH IN MOTOR VEHICLES IN INDIA AND IN METROPOLITAN CITIES

Within 10 years from 1990 to 2000 there has been almost a three-fold increase in the number motor vehicles in India. On an average 10% increase has been found in each year, which is a serious concern for air pollution.

THE ENVIRONMENTAL EFFECTS OF URBANIZATION

- The urban heat island has become a growing concern and is increasing over the years. The urban heat island is formed when industrial and urban areas are developed and heat becomes more abundant. In rural areas, a large part of the incoming solar energy is used to evaporate water from vegetation and soil.

- Global warming, air pollution, water scarcity and pollution and loss of forest cover, agricultural land and depletion of wildlife as a result of urban sprawl, pose serious threats to the environment.

- Urban areas suffer from serious problems of environmental pollution. There are high levels of air pollution and noise pollution due to industries and automobiles. Water is also polluted due to industrial wastewater discharge. Solid waste generation in urban areas is very high, and its proper disposal is a major problem.

- Proper sewerage facilities are often lacking in urban areas. In the crowded slums, the human waste is just deposited in gutters or vacant spaces, which become a breeding ground for pathogenic bacteria spreading salmonella and hepatitis infections. In most of the cities heavy rainfall totally upsets the sewerage system.

- Cities are warmer than villages. Due to lot of heat released by various types of human activities in cities, which get retained by built structures and then slowly released into the atmosphere there is creation of urban heat island. This problem can be partially tackled by growing green belts of trees.

- Urbanization also provides several benefits when there is a well-planned city with proper transportation and residential facilities, reducing pollution problems.

- Rural-Urban Distribution Tamil Nadu Series 34, Director of Census Operations Tamil Nadu, Government of India. Due to better access to health care, educational and social service facilities, infant mortality is less in cities.

CONCLUSION

The percentage of poor people is growing in many countries. Due to such a low income the main goal for the people is to get their daily meal, water and accommodation. For these people the environmental problems are not in the front line. Because of this the solving of environmental problems in developing countries are not easy. The rapid growth rate the country was ranked much lower as compared to other developing nations of South East Asia. The major factors that affected urbanization were increase in population, migration from rural areas. However with the urban growth issues related to development also emerged. There has been increase in slums, reduction in civic amenities, increase in property prices, increase in prices of other essentials and non essential commodities.

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