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ijirset@gmail.com



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# Problems of Environmental Pollution on Human Health

**Dr. Manas Anand**

Assist. Professor, Dept. of Geography, U.P.R.T. Open University, Prayagraj, U.P, India

The environmental crisis is caused due to environment and ecological changes as a result of developmental process of the 'economic and technological man' of the present century. In fact if the present century is marked by socio-economic, scientific and technological development on the one hand, it is plagued by serious problems of environmental problems on the other hand. The life of common man is being so rapidly adversely affected by environmental degradation caused by man himself that there has been a marked growth of interest within the last decade in the quality of the environment, the disruption of the earth's natural ecosystems and the depletion of resources. Population is an important resource for development, yet it is a major cause of environmental degradation when it exceeds the threshold limits of the support systems. The overriding impact of adverse demographic pressure ultimately falls on our resources and ecosystems. Combined with it the conditions of poverty and underdevelopment themselves create a situation where the people are forced to live in squalor and further degrade their environment.

**KEYWORDS:** Environmental, Degradation, problems, Adversely, affected and. Population.

## I.INTRODUCTION

The significance of environmental factors to the health and well-being of human populations' is increasingly apparent. Environment pollution is a worldwide problem and its potential to influence the health of human populations is great. Pollution reaches its most serious proportions in the densely settled urban-industrial centers of the more developed countries. In poor countries of the world more than 80% polluted water have been used for irrigation with only seventy to eighty percent food and living security in industrial urban and semi urban areas. Industry, clustered in urban and semi-urban areas surrounded by densely populated, low-income localities, continues to pollute the environment with impunity. Over the last three decades there has been increasing global concern over the public health impacts attributed to environmental pollution, Human exposure to pollution is believed to be more intense now than at any other time in human existence. Pollution can be made by human activity. There is no doubt that excessive levels of pollution are causing a lot of damage to human & animal health, plants & trees including tropical rainforests, as well as the wider environment.

The environmental crisis is caused due to environment and ecological changes as a result of developmental process of the 'economic and technological man' of the present century. In fact if the present century is marked by socio-economic, scientific and technological development on the one hand, it is plagued by serious problems of environmental problems on the other hand. The environmental crisis arising out of the environmental deterioration caused by several forms of pollution, depletion of natural resources because of rapid rate of their exploitation and increasing dependence on energy consuming and ecologically damaging technologies, the loss of habitats due to industrial, urban and agricultural expansion, reduction and loss of ecological populations due to excessive use of toxic pesticides and herbicides and loss of several species of plants due to practice of monoculture removal of habitats through forest clearance has now become of global concern. The life of common man is being so rapidly adversely affected by environmental degradation caused by man himself that there has been a marked growth of interest within the last decade in the quality of the environment, the disruption of the earth's natural ecosystems and the depletion of resources.

The most striking reason of the environmental degradation and hence global environmental crisis is the fact of deteriorating relationship between man and environment because of rapid rate of exploitation of natural resources, technological development and industrial expansion. The rate of environmental change and resultant environmental degradation caused by human activities has been so fast and widespread. The impact of man on environment through his economic activities are varied and highly complex as the transformation or modification of the natural condition and process leads to a series of changes in the biotic and abiotic components of the environment. The impacts of man on environment fall into two categories (i) direct or intentional impacts and (ii) indirect or unintentional impacts, Direct or intentional impact of human activities are preplanned and premeditated because man is aware of the consequences,

both positive and negative of any programme which is launched to change or modify the natural environment for economic development of the region concerned. The effects of anthropogenic changes in the environment are noticeable within short period and these effects are reversible. On the other hand the indirect impacts of human activities on the environment are not premeditated and preplanned and these impacts arise from those human activities which are directed to accelerate the pace of economic growth, especially industrial development. The indirect impacts are experienced after long time when they become cumulative. These indirect effects of human economic activities may change the overall natural environmental system and the chain-effects sometimes degrade the environment to such an extent that this becomes suicidal for human beings.

## II. REVIEW OF LITERATURE

**Pandve, (2008)** The link between environmental concerns, its effects on people, and the resulting consequences on human life and the economy are easily traceable. Higher the environmental destruction greater the health problems faced by the people resulting in both human and economic costs. Figure I maps out the link between environmental concerns, effects of these concerns, and the resulting human and economic toll on a country. For example, in 2006 it is estimated that inadequate sanitation costs India almost \$54 billion or 6.4% of the country's GDP.

**Chen, et. al., (2013)** On environmental issues and concerns, India carries a heavier burden because it is generally accepted that pollutant concentrations are exceedingly high in many developing countries imposing substantial health costs and shortened lives.

**Mandal, (2010)** study on the issue of energy use efficiency in the Indian cement industry has shown that environmental regulation has a reinforcing effect on energy use efficiency.

**Ranganath (2015)** India has to adopt some sustainable actions that need to address the myriad issues facing the country including environmental degradation in order to sustain its prospects for continued economic growth.

## III. METHODOLOGY

The method used in this paper is descriptive-evaluative method. The study is mainly review based. It is purely supported by secondary source of data, i.e. books, journals, papers and articles and internet.

## IV. RESULTS AND DISCUSSIONS

### Air Pollution:

The air we breathe is an essential ingredient for our wellbeing and a healthy life. Unfortunately polluted air is common throughout the world specially in developed countries. Polluted air contains one, or more, hazardous substance, pollutant, or contaminant that creates a hazard to general health. The main pollutants found in the air we breathe include, particulate matter, PAHs, lead, ground-level ozone, heavy metals, sulphur dioxide, benzene, carbon monoxide and nitrogen dioxide. Air pollution in cities causes a shorter lifespan for city dwellers. According to Mishra (2003) rapid growth in urban population, increasing industrialization, and rising demands for energy and motor vehicles are the worsening air pollution levels. He added other factors, such as poor environmental regulation, less efficient technology of production, congested roads, and age and poor maintenance of vehicles, also add to the problem. He further added that air pollution is caused of ill health and death by natural and man-made sources, major man-made sources of ambient air pollution include tobacco smoke, combustion of solid fuels for cooking, heating, home cleaning agents, insecticides industries, automobiles, power generation, poor environmental regulation, less efficient technology of production, congested roads, and age and poor maintenance of vehicles. The natural sources include incinerators and waste disposals, forest and agricultural fires.

### Water pollution:

The water we drink are essential ingredients for our wellbeing and a healthy life. Unfortunately polluted water and air are common throughout the world. The WHO states that one sixth of the world's population, approximately 1.1 billion people do not have access to safe water and 2.4 billion lack basic sanitation. Polluted water consists of Industrial discharged effluents, sewage water, rain water pollution and polluted by agriculture or households cause damage to human health or the environment. This water pollution affects the health and quality of soils and vegetation. Some water pollution effects are recognized immediately, whereas others don't show up for months or years. Estimation indicates that more than fifty countries of the world with an area of twenty million hectares area are treated with polluted or partially treated polluted water including parts of all continents and this poor quality water causes



health hazard and death of human being, aquatic life and also disturbs the production of different crops. In fact, the effects of water pollution are said to be the leading cause of death for humans across the globe, moreover, water pollution affects our oceans, lakes, rivers, and drinking water, making it a widespread and global concern. A drinking water contained a fluoride content ranging from 5.26 to 26.32 milligrams per liter and this is too high as compared to the World Health Organization's standard of 0.6 to 1.7 milligram per litre.

#### **Land Pollution:**

Improper management of solid waste is one of the main causes of environmental pollution. Land pollution is one of the major forms of environmental catastrophe our world is facing today. Heavy metal industries have produced wastes that are deposited into landfills without special precautions. The population lives in the vicinity of waste sites that do not conform to contemporary standards.

#### **Effects of Environment on Human, Animals and Plants:**

Environment dying is global perilous point which catastrophically the human, animals and plants. Air pollution results are Cancer, neurobehavioral disorders, cardiovascular problems, reduced energy levels, premature death, asthma, asthma exacerbations, headaches and dizziness, irritation of eyes, nose, mouth and throat, reduced lung functioning, respiratory symptoms, respiratory disease, disruption of endocrine and reproductive and immune systems. Polluted drinking water or water polluted by chemicals produced waterborne diseases like, Giardiasis, Amoebiasis, Hookworm, Ascariasis, Typhoid, Liver and kidney damage, Alzheimer's disease, non-Hodgkin's Lymphoma, multiple Sclerosis, Hormonal problems that can disorder development and reproductive processes, Cancer, heart disease, damage to the nervous system, different type of damages on babies in womb, Parkinson's disease, Damage to the DNA and even death, meanwhile, polluted beach water contaminated people like stomach aches, encephalitis, Hepatitis, diarrhoea, vomiting, gastroenteritis, respiratory infections, ear ache, pink eye and rashes. Loss of wild life is directly related to pollution and according to Water Pollution Effects on animals i) Nutrient polluted water causes overgrowth of toxic algae eaten by other aquatic animals, and may cause death; it can also cause eruptions of fish diseases, ii) Chemical contamination can cause declines in frog biodiversity and tadpole mass iii) Oil pollution can increase susceptibility to disease and affect reproductive processes and negatively affect development of marine organisms and it can also a source of gastrointestinal irritation, damage to the nervous system, liver and kidney damage iv) Mercury in water can cause reduced reproduction, slower growth and development, abnormal behavior and death v) Persistent organic pollutants may cause declines, deformities and death of fish life and Fish from polluted water and vegetable/crops produced or washed from polluted water could also make impact on human and animal health. More sodium chloride (ordinary salt) in water may kill animals and plants, plants may be killed by mud from construction sites as well as bits of wood and leaves, clay and other similar materials and plants may be killed by herbicides in water. For tree and plants water pollution may disrupt photosynthesis in aquatic plants and thus affecting ecosystems that depend on these plants. Soil pollution effects causes according to tutorvista are cancer including leukaemia and it is danger for young children as it can cause developmental damage to the brain furthermore it illustrated that mercury in soil increases the risk of neuromuscular blockage, causes headaches, kidney failure, depression of the central nervous system, eye irritation and skin rash, nausea and fatigue. Soil pollution closely associated to air and water pollution, so its numerous effects come out as similar as caused by water and air contamination. Small life forms may consume harmful chemicals which may then be passed up the food chain to larger animals; this may lead to increased mortality rates and even animal extinction.

#### **MAIN CAUSES OF ENVIRONMENTAL POLLUTION:**

The problem of environmental pollution, we face today, is a complex consequence of forces connected with various interrelating factors. There are clearly a number of divergent and conflicting views of what could be the basic factors underlying the environmental crisis. No single cause can be considered as the root cause of environmental impairment. However, the following causes could be pointed out as the generally underlying factors though each of these too could be operating simultaneously and their balance may vary from place to place and through time.

#### **Population growth:**

Modern thinkers consider that growth of population is the root cause for many human problems. This observation also applies to environmental degradation. Increase in the population will have a multiplier effect requiring proportionate increase in all requirements necessary for the existence of human beings. Population growth requires abnormal exploitation of natural resources to provide day-to-day essential requirements of life. It results in migration of people and growth of urban areas, thereby inviting new problems of health, ecology and human sustenance.

### **Nature of Modern Technology:**

The nature of productive technology in recent years is closely related to the environmental crisis. Commoner maintains that sweeping transformations of productive technology since World War II productive technologies with intense impacts on environment have displaced less destructive ones. This factor has been largely responsible for the generation of synthetic and non-biodegradable substances such as plastics, chemical nitrogen fertilizers, synthetic detergents, synthetic fibres, big cars, petrochemical and other environmentally injurious industries and 'disposable culture. Thus, environmental crisis is the inevitable result of a counter ecological pattern of productive growth. Ecologically benign technologies did and do exist but they are not utilized, for they are considered inconsistent with the short-term interests of private profit maximization.

### **Deforestation:**

Forests are invaluable property of a nation because they provide raw materials to modern industries, timber for building purposes, habitats for numerous types of animals and micro-organisms. Good fertile and nutrient-rich soils having high content of organic matter, offer protection to soils by binding the soils through the network of their roots and by protecting the soils from direct impact of falling raindrops. They encourage and increase infiltration of rainwater and thus allow maximum recharge of groundwater resources, minimize surface run-off and hence reduce the frequency, intensity and dimension of floods. They help in increasing the precipitation; they are natural sink of carbon dioxide because they use carbon dioxide to prepare their food during the process of photosynthesis. They provide firewood to millions of people all over the world and food and shelter to innumerable humans and animals. In fact, forests are 'life line' of a nation because prosperity and welfare of the society directly depends on sound and healthy forest cover of a nation concerned. Forests are main component of the biotic components of the natural environmental system and the stability of the environment and ecological balance largely depend on the status of the forests of the region concerned. It is a matter of serious concern that the present economic man has forgotten the environment and ecological significance of natural vegetations mainly forests and grasslands and has destroyed the forests so rapidly and alarmingly that the forest areas at global, regional and local levels have so markedly decreased that several serious environmental problems such as accelerated rate of soil loss through rain splash, sheet wash, rill and gully erosion, increase in the frequency and dimension of floods, greater, incidence of drought due to decrease in precipitation etc. have plagued the modern human society. The major causes of deforestation at global and regional levels are conversion of forest land into agricultural land, shifting cultivation, transformation of forests into pastures, overgrazing, forest fires, lumbering, multipurpose river projects etc. Deforestation gives birth to several problems encompassing environmental degradation through accelerated rate of soil erosion, increase in the sediment load of the rivers, siltation or reservoirs and river beds, increase in the frequency and dimension of floods and droughts, changes in the pattern of distribution of precipitation, intensification of greenhouse effects increase in the destructive force of the atmospheric storms etc. economic loss through damages of agricultural crops due to increased incidence of floods and draughts, decrease in agricultural production of loss of fertile top soils, decrease in the supply of raw materials to the industries and building matters etc. Thus deforestation cause a chain effects which adversely affect the natural environment.

### **Agricultural Development:**

Agricultural development means expansion of agricultural land increase in agricultural productivity and net agricultural production. It is due to development of modern scientific techniques, advanced technologies, increased production and use of chemical fertilizers, expansion in irrigational facilities, development of high yielding varieties of seeds, etc. This has solved the problem of growing demand of food due to ever increasing world population on the one hand; it has also created or is creating hazardous environmental problems of serious concern on the other hand. Thus modern economic and technological man is at the cross road of dangers in all directions. The agricultural development degrades the environment in a variety of ways, e.g. (i) through the application of chemical fertilizers and pesticides and insecticides, (ii) through the increase in irrigational facilities and amount of irrigation, (iii) by making changes in biological communities etc. Conversion of forests land into agricultural farms on sloppy ground accelerates rate of soil erosion. Increased in agricultural land at the cost of destruction old forest and consequent soil erosion, substantial increase in the productivity of land through the practice of intensive cultivation, increased use of machines and modern scientific techniques, application of chemical fertilities, pesticides, insecticides and herbicides, increase in the frequency and area of watering of agricultural fields, etc. All these processes and measures of increased agricultural development cause several serious environmental problems. It appears that the root cause of all these environmental problems arising out of agricultural development is the increase of human population at alarming rate. So the foremost step to be taken is to stop population growth because if population continues to grow agricultural development has to be maintained.

### Industrial Development:

Rapid Industrial Development has given economic prosperity to human society. It has also given new dimension to socio-economic structure and has provided material comfort to the people of industrially developed countries but it has also created many fold environmental problems. In fact, the glittering effects of industrialization have affected the mind of the general public that industrialisation is now being considered as the parameter of modernity and as a necessary element of socio-economic development of a nation. Rapid rate of industrialization resulted into rapid rate of exploitation of natural resources and increased industrial output. Both the components of industrial development e.g. exploitation of natural resources and industrial production have created several lethal environmental problems and have caused large scale environmental problems and ecological imbalance at global, regional and local levels in a variety of ways. Exploitation of natural resources in order to meet the industrial demand of raw materials has resulted into (i) the reduction of forest covers due to reckless falling of trees, (ii) excavation of land for mining purposes, (iii) reduction in arable land due to industrial expansion, (iv) lowering of groundwater level due to excessive withdrawal of groundwater, (v) collapsing of ground surface due to withdrawal of mineral oil and groundwater, etc. Besides desired production there are numerous undesired outputs from the factories such as industrial wastes, polluted water, toxic gases, chemical precipitates, aerosol ashes and smokes etc. which pollute air, water, land, soils etc., and thus degrade the environment. The industrialized countries have increased the concentration of pollutants emitted from the factories in the air, water and land to such an extent that they have degraded the environment to the critical limit and have brought the human society on the brink of its destruction. The adverse effects of industrialization may change the overall character of natural system and the chain effects sometimes become suicidal for human society. Similarly the release of industrial wastes into stagnant waters of ponds, tanks, and lakes into rivers and seas contaminates water and causes several diseases and deaths of organism and thus disturbs ecological balance of aquatic ecosystem. Increasing industrial expansion is responsible for the release of enormous quantities of pollutants (e.g.) ions of chlorine, sulphate, bicarbonate, nitrate, sodium, magnesium, phosphate, through sewage effluents into the rivers and the lakes and thus for contaminating the water. Release of several gases, smokes, ashes and other aerosols from the chimneys of the factories adversely affects the environment in a number of ways. The burning of hydrocarbon fuels (coal and petroleum) has increased the concentration of CO<sub>2</sub> in the atmosphere and thus has changed the natural gaseous composition of the atmosphere. The increase in the construction of CO<sub>2</sub> content of the atmosphere may change global radiation and heat balance by increasing the level of sensible heat in the atmosphere because CO<sub>2</sub> intensifies the greenhouse effects of the atmosphere as CO<sub>2</sub> allows the solar radiation to pass through the atmosphere and reach the earth's surface but stops the outgoing long wave terrestrial radiation from escaping to the space release of chlorofluoro carbon in the atmosphere causes depletion of ozone layer.

### Urbanization:

Exodus of population from rural areas to urban centre and origin and expansion of new urban centres due to industrial expansion and development are responsible for rapid rate of exploitation of natural resources and several types of environment degradation and pollution in the developed and developing countries. The level of urbanisation in the developed countries of the world has already reached its peak. The accumulation of wealth and availability of more economic and job opportunity in the urban centres have resulted into the concentration of population in the congested metropolitan areas and thus the formation and growth of big slum areas. In fact, increasing urbanization means increase in the concentration of human population in limited space which results in the increase of buildings, roads and streets, sewage and storm drains, vehicles (motor cars, trucks, buses, motor cycles, etc.) number of factories, urban wastes, aerosols, smokes and dusts, sewage waters etc. which cause several environmental problems. About 60 per cent, of the pollution of Indian capital city of Delhi is contributed by vehicles, Calcutta and Bombay metropolitan areas have also reached high level of air pollution. According to the survey report of the National Environmental Research Institute, Nagpur (India) the level of air pollution in Delhi, Calcutta, Bombay, Madras, Ahmedabad, Cochin, Hyderabad, Kanpur, Nagpur etc. has gone up. Besides industrial wastes from industrial cities, huge quantity of urban solid wastes also creates environmental problems. The quantity of urban solid wastes is rapidly increasing with urban expansion and growth in urban population.

### V.CONCLUSION

It appears that polluted environment is global an issue and world community would bear worst results more as they already faced. As effective response to pollution is largely based on human appraisal of the problem and pollution control program evolves as a nationwide fixed cost-sharing effort relying upon voluntary. Education, research, and advocacy, are lacking in the region as preventive strategy for pollution especially in Asia. At present the adoption of environmental auditing in any economic sector is voluntary but future legislation could well make it mandatory and



still time available to use technology and information for environmental health decision. Policymakers in developing countries need to design programs, set standards, and take action to mitigate adverse health effects of air pollution. Population is an important resource for development, yet it is a major cause of environmental degradation when it exceeds the threshold limits of the support systems. The overriding impact of adverse demographic pressure ultimately falls on our resources and ecosystems. Combined with it the conditions of poverty and underdevelopment themselves create a situation where the people are forced to live in squalor and further degrade their environment

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