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Environmental Issues in India and Their Solutions

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Abstract:
Indian environment has been deteriorated remarkably in the past 50 years due to rapid decline in natural resources and severe increase in pollution level. Depletion of forests, population growth, vehicular emissions, use of hazardous chemicals and various other undesirable human activities are mainly responsible for this degraded scenario of environmental health in India. It is, in fact, rendering considerable economic loss to the country and warrants serious attention of policymakers, administrators, scientists and people altogether to save the environment and humanity and to provide generational equity. The present paper deals with the threat of environmental degradation and suggests some possible remedial measures for eco-conservation in India. Now it is essentially advisable to become protector, producer and caretaker of natural resources and not the predator, polluter and consumer of earth.

Keywords: environment, pollution, forests, population, hazardous, remedies, solution, problems, nature, natural

India has achieved more than 50 years of self-government thanks to the continuous commitments and sustained efforts of individuals and governments in the social, economic, ideological and innovation fields that have resulted in the desire to win. A country unable to pin in 1947 is outraged at the development of large airplanes and rockets, the use of atomic materials for peace. India's achievements in research and innovation in the last five years are astounding and this includes space exploration, atomic refining, steel, fertilizer, petroleum, pharmaceuticals, mechanical equipment, construction, etc. will demonstrate the skills developed through In the last three years, thanks to the green revolution, the generation of farmers has accomplished what changed India in the fifties, from rice trader to exporter. Advances in agribusiness have expanded today's range of quality crops through the use of fertilizers and pesticides.

Bringing more nutritious products to the masses saved people from famine and epidemics. On the other hand, different activities such as the construction of large dams, laying the foundations of control devices and mechanical devices are changing the relationship between man and nature. It is not their personal finances and lifestyles that they change, but

their values, foundations, thoughts, beliefs, and, of course, lifestyles. Expanding more forests for buildings, roads and other construction for agriculture has led to the extinction of many plant and animal species and has also affected conflict. In this case, the unpredictable destabilizing effects of the forest environment led to the destabilizing effects of the comparative reuse framework.

Storms of modernization and industrialization have destroyed human land and the environment instead of evacuating people. The increase in carbon monoxide emissions from machinery and the increase in carbon dioxide emissions from living beings and humans, and the increase in carbon dioxide emissions from a combination of fossil energy, is explained as the reduction of carbon emissions from trees and plants in order to keep plants adaptable. The biosphere has been preserved since ancient times.

Today, environmental pollution is a threat to our country and has become a widespread phenomenon in cities and villages in India. The large influx of people from rural areas to urban areas has led to overcrowding in urban areas. Rapid industrialization and urbanization have increased pollution, especially in big cities. About 72% of air pollution comes from vehicle emissions, which is associated with a 12 times higher risk of respiratory failure. About 12% of school children in Delhi suffer from asthma.

Urban areas produce more than 20 billion liters of sewage and around 5,000 metric tons of waste every day, polluting soil and groundwater. The Ganges, the symbol of Indian culture and civilization and its holiest river, has become the most polluted river in the world. Wastewater containing various pollutants, primarily toxic and pesticides, is discharged into the nearby land and reduces soil fertility (Singh, 1989). Plants constantly accumulate toxic substances in many places (Ray, 1990), which affects human health. Indian cities are considered the loudest cities in the world due to the lack of voice control in our factories and cars, as well as crash tweeters.

Our industrialization, mechanization, our cars have increased the noise of big cities. According to a study by the All India Institute of Medical Sciences in New Delhi, the average noise level in India's major cities exceeds the international limit. Loud sounds above 100 decibels are unbearable and can damage many organs of the human body, such as the brain, heart, ears. The loud noise of supersonic aircraft not only damages windows and fences, but also affects heart rate, hearing, heart function, brain, eyes and more.

Population has put a lot of pressure on the environment over the past few decades. About 34 million people in 1947 rose to 86 million at independence in 1991, may cross the 100 million mark at the turn of the century and exceed 2 billion by 2035 (Patel, 1994). The sad truth is that refugees in India add Australia to the country every year. The concentration of population in highly polluted areas of the city has become more severe. Economic interests ignore the environment. In densely populated cities in my country, water, garbage, garbage,laundry soap, etc. Despite all efforts to stop it, this growth has recently been curtailed by societal norms.

Between 1947 and 1997, rapid population growth and mismanagement depleted a great deal of our natural resources. The fresh water supply was reduced by two-thirds. Land

degradation has reached nearly 8 million hectares, which is a disaster for agricultural productivity. As a result of the population explosion, the number of animals grazing in the forest has tripled from the ideal, and the arable land per capita has decreased by half. Overuse of groundwater in important agricultural areas is a major problem. Tier 1 and Tier 2 cities in India produce a lot of sewage every day, but only one-tenth of that is treated. The total volume of urban sewage has increased sixfold over the past 50 years. The water consumption of the large drinking water industry has increased 40 times, but they have not treated the huge volumes of wastewater they produce. The amount of municipal waste has increased sevenfold, but its collection, transportation and disposal remains often unscientific and dangerous. It has caused approximately 2 reasons for indoor and outdoor pollution. Five million people have died prematurely since independence.

Although the Forest Management Act of 1952 set a target of 100 million hectares of forest area, or 33% of the country's total area, our forests continue to shrink, causing yet another wage and nutrient shortage in urban India. According to the State Agriculture Committee report, since the beginning of 2000 AD, the demand for firewood reached 22 million cubic meters. Fuel supply should be one-third of demand. In the last forty years of independence, the forest has suffered the most destruction. As the human population and cattle herds increased, forest areas were cleared for agriculture and other domestic uses. Similarly, railways, highways, etc. expanded their networks. Forests were reduced by constructing dams, projects, bridges and other buildings. If 2.5 hectares of forest are cut down per minute, India will turn into the Sahara Desert in 50-100 years.

Uncontrolled deforestation, intensive irrigation and mining activities are the major cause of land degradation. Deforestation on a massive scale has resulted in an unmanageable fast flow of water from upstream areas. The eroded soil has led to siltation of rivers which naturally have over- flown their banks with roaring speed. It has been estimated that about 23 billion tonnes of soil are lost every year. The Thar Desert is expanding at the rate of one km per year. Drought-prone areas have been ever expanding, as a result, some of the districts in U.P. like Tehri and Uttarkashi, Bankura in West Bengal and large areas of Rajasthan fell to acute scarcity of water. Lakes, rivers and streams are drying day by day. The water area of Chilka (Orissa) has been reduced from 1165 sq km to 900 sq km. Loktak Lake, the largest freshwater inland lake, has been reduced from 495 sq km to 390 sq km in ten years causing a serious ecological problem in Kashmir valley. The defective drainage system and encroachment on Dal Lake and the closure of the Nallah are hindering the flood channel linking the Dal with the Jhelum. Soil erosion is a natural process and is as old as the earth. But today it has increased to the point where it far exceeds the natural formation of new soil. In the face of continuously expanding the demand for agricultural products and increase in pressure on

land, soil erosion is accelerating. Indeed the agricultural land is losing its productive top soil 20 to 40 times faster than soil naturally can reform in thousands of years.

The green house effect is one of the most hotly debated environmental issues of the current world. With the increase in green house gases (carbon-dioxide, water vapour, Methane, chlorofluorocarbons etc.) in the atmosphere, the average temperature of earth has been rising

slowly but steadily. The adverse physiological effects of double atmospheric CO2 on climate have been described by Sellers et al. (1996). If the present trend is allowed to continue as usual, the global temperature in 2050 may rise as high as 3.5 degree celsius above the pre- industrial level which is well above the ceiling of tolerability (Kelley, 1990) and snow covered mountains melt into water thereby raising the sea level by several kilometers. Rapid climatic change in tropical Atlantic region also occurred during last deglaciation (Overpeck et al., 1996). Recently, a bio-molecular model for environmental adaptations in animals have been proposed in order to cope up with the rapid climatic change in environment (Tripathi, 1997). Deforestation indirectly increases the amount of carbon- dioxide thereby increasing the atmospheric temperature. India is the world's six biggest producer of CO2. The average climate of the Indian plain would become hotter and drier which would affect the agricultural yield due to increased weed infestations and insect attack (Das, 1991). Industrial and vehicular emissions have contributed their own share of harmful effects to the environment. Acidification is a common problem in the industrialised countries. In India, vehicles contribute more than 30 per cent of the photochemical smog in the atmosphere. The major cities of the country have an average of more than 15,00,000 vehicles each. More than 2.5 million different types of vehicles are running in our capital Delhi. The use of chlorofluorocarbon in refrigeration units and organochlorine pesticides in agriculture are causing severe damages to the environment. These chemicals liberate chlorine which enters into stratosphere region of the atmosphere and diminishes the volume of ozone allowing more ultraviolet rays of the sun to penetrate into the atmosphere which is very harmful to the human health. The total emission and pollution of sulphur dioxide in India is estimated to be more than 4 million tonnes because of tremendous increase of vehicles of all kinds. As a result, some of the oldest and rarest architectural, cultural and historical monuments and structures have been affected, corroded and mutilated. On 11th Dec., 1997, the delegates from 159 nations attending the "World Climatic Conference" in Kyoto (Japan) reached on an agreement that the industrialized nations (38 developed countries) will reduce their average annual emission of six greenhouse gases by 5.2 per cent from 1990 levels between the year 2008 and 2012. However, India didn't give any binding commitment in the conference to reduce the emission of greenhouse gases due to its poor economy and a high population pressure.

Pesticides are the most important factor in improving agricultural production particularly in developing countries to sustain the greater supply of food, necessary to feed their growing population. Amount of hazardous chemicals used in India is very high. The average per hectare pesticide consumption has increased remarkably during the last three decades (Gupta, 1988). Less than 0.1 per cent pesticides reach the target pest and remainder negatively affect humans, livestock and natural biota. This tendency to look at only higher production neglecting the hazardous consequences of ecological disturbance has led to severe environmental degradation arising from their use. Indiscriminate and heavy use of pesticides has contaminated the food grains, dairy products, fruits, vegetables, fodders, horticulture land, drinking water and the living environment as a whole (Mehrotra, 1983). Aquatic living species die as the pesticides washed down from the fields to rivers, tanks and other water reservoirs. Cosmetic pesticides are sprayed indiscriminately on fruits and vegetables in major cities of India to improve the look

e.g., methyl parathion on cauliflower gives an extra white look, lady fingers dipped in copper sulphate to look greener. Majority of synthetic pesticides are not easily degradable and tend to enter food chains. They spread their toxic effect through ecological cycling and biological magnification and cause serious health problems in human and animal subjects. Organochlorine and organophosphorous compounds are presently predominating in use. The former is stable under various environmental conditions. Chrolorinated pesticides are the most prevalent toxicants in the Indian environment. The environmental half life of such chemicals reported to be ten years or more (Brooks, 1976). Use of these pesticides has either been banned or discouraged in developed countries as they create several environmental and health hazards. Liver and kidney damages are observed in long exposure to organochlorine pesticides whereas organophosphorus toxicity results decline of memory (Korsak & Sato, 1977), loss of appetite, tremors and psychic disorders and paralysis in exceptional cases. They may even result in mutation of genes and these changes become prominent only after a few generations. In the most natural situation, the plants, animals and micro-organisms of the soil are absolutely essential for its fertility. The soil contains micro-organisms that are responsible for the conversion of nitrogen, phosphorous and sulphur to the forms available for plants. Recognizing the fact that most of the complex physical and chemical processes responsible for soil fertility are dependent on soil microorganisms, the environmental biologists are opposed to the continuing treatment of soil with heavy doses of deadly and persistent toxicants. Sometimes our agricultural products are rejected in international market due to high pesticidal content. Import of banned and carcinogenic pesticides and toxic wastes including lead, zinc and aluminium ash, plastic scrap and slag, at the rate of more than 60,000 metric tonnes per year still continues from developed countries at a cheaper rate. Under this alarming situation, Hon'ble Supreme Court of India have issued some directives on the import of hazardous wastes and to restrict the use of pesticides in Indian environment.

Environmental protection vis-a-vis development is a great challenge we face today. Conditions like population growth, poverty, unemployment and under development supplemented by the negative effects of badly planned development over the last five decades have landed us today in a vicious circle. Implication of some regulatory measures may control vehicular and industrial emissions. It should be checked strictly whether factories and industrial units did not violate the standards set by various relevant acts and laws. There is also a need to introduce eco-friendly refineries and eco-friendly thermal power plants to reduce pollution in the localities.

In addition to a direct control of the population growth, there is a need to provide health care, improve female literacy, sex education, job opportunities for woman and above all to motivate priest and religious preachers to induce people to take up family planning. Involvement of voluntary organization in social education and effective communication for promoting contraceptive methods may also be effective in this mission.

Some important protective measures should be taken up for the conservation of forests and wildlife in India. Forest areas may be maintained for certain objectives like, protection of mountain slopes and catchment areas, protection against wind blown sand and erosion and

ravine formation, protection for pastures, roadside avenue, aesthetic value and recreation. In order to conserve wildlife, programmes like creation of more national parks, sanctauries and reserved areas should be encouraged. Better forest protection and management can improve agriculture, flood control, irrigation and power and prevent silting of lakes and reservoirs.

To meet the food demand for growing population, rise is agricultural production is of utmost importance and hence pesticides are indispensable. The use of pesticides should be managed in such a way that it will not pose any threat to the environment and human life. The problem of hazardous consequences of the use of chemical pesticides for controlling pest and diseases can be solved effectively by developing and practising plant based pesticides. A large number of different plant species contain natural insecticidal material. Some of these have been used by man as insecticide since very early times. There are around 600 plant species from all over the world which have been found to exhibit biocidal activity and some of the plant products have been recommended for the control of pest and diseases of various agricultural, horticultural, fruit and other economical crops. The easy availability, biodegradability, non-toxicity to living beings, eco-friendliness and broad spectrum activity of plant based pesticides provide an eco-friendly approach for effective pest control. Botanical pesticides have the potential to replace chemical pesticides and are good hope for healthier environment in future. Biological control is a fundamental ecological process, although the use of biological regulators in the control of plant pathogens is still poorly understood and deserve a thorough evaluation before it is optimised in agricultural practices. All the same, biological agents can offer non-polluting solutions to recalcitrant problems in agriculture, when poorly utilized (Ford, 1992). Organic waste management for manure production and establishment of biogas units to generate energy will be very promising in reducing environmental pollution. The discharge of pesticide waste residues and other toxicants, which contribute to environmental pollution subsequent to their water run-offs from crops, can be degraded by genetically engineered microorganisms. Popularizing the vermiculture technology for managing organic waste resources will be very effective in creating a sustainable environment in India (Tripathi et al., 1995).

The main hurdle confronting the environmental protection in India today is that there is a lack of scientific knowledge and desire to act in this direction. The NCERT has prepared and developed syllabi, textbooks and other necessary materials in conformity with the new education policy to emphasize the environmental considerations. UGC has initiated research projects to further promote environment education in universities. Forestry as a subject has been taught for the past few years in eight agricultural universities. On the initiative of Ministry of Environment and Forest topics like pollution control, soil degradation, wildlife management, meteorology, cultivation have been introduced in formal education.

Conclusion:

A great national effort has been directed towards environmental awareness through the enactment of various Acts viz., National Forest Policy, 1952; National Committee on Environmental Planning and Coordination, 1972; Water Pollution Control Act, 1974; Wildlife Protection Act, 1974; Forest Conservation Act, 1980; Prevention and Control of Air Pollution Act, 1981; Environmental Protection Act, 1986 etc. Unfortunately due to lack of proper

implementation of all these policies as well as strict enforcement of acts, the degradation of forest and environment continues unchecked. For the survival of rapidly growing population we have to ensure conservation of resources on scientific lines to provide food, clothing and shelter for our millions. We have to plan our development efforts in such a way that a harmonious balance is maintained between man and his environment. Any process of planning should be based on the principle of Development without Destruction. Social workers and environmentalists should create public opinion and mobilise corrective and preventive action against this threat. The society and all concerned need to be convinced of the importance of the environment and we have to realize the fact that the way how to live today will influence tomorrow.

References

Brooks, G.T. (1976). Chlorinated Insecticides. CRC Press Inc., Cleveland, Ohio.

Das, T.M. (1991). Greenhouse Effect and Indian Subcontinent. SAARC conference, Indian Society for Plant Physiology, BHU, Varanasi.

Ford, B.J. (1992). Biological control of Microbial Plant Pathogens. R. Campbell Cambridge Univ. Press, London.

Gupta, P.K. (1988). Pesticides in the Indian Environment. Interprint Publishers, New Delhi.

Kelly, M.H. (1990). Global Warming. In: Leggett. J. (eds.), Global Warming, The Green Peace Report, Oxford University Press, London, pp. 83-112.

Korsak, R.J. & Sato, M.M. (1977). Effects of chronic organophosphate pesticide exposure on central nervous system, Clinical Toxicology, 11: 83.

Mehrotra, K.N. (1983). Benefits and Hazards of Pesticides to Society. Pesticide Information, 38.

Overpeck, J.T., Peterson, L. C. & Trubore, S. (1996). Rapid climate change in tropical Atlantic region during the last deglaciation. Nature, 380: 51-53.

Patel, M.K. (1994). In: Environmental Pollution: Impact of Technology on quality of life (ed. Malabika Ray), Today and Tomorrow's Printers & Publishers, New Delhi.

Ray, M. (1990). Accumulation of heavy metals in planta grown in industrial areas. Indian Biologists, XXIII: 33-38.

Seller, P.J., Bounoua, L., Collatz, G.J., Randall, D.A., Zazlich, D.A., Los, S.O., Berry, J.A., Fung, I., Tucker, C.J., Field, C.B. et al. (1996). Comparison of radiative and physiological effects of double atmospheric CO2 on climate. Science, 271: 1402- 1405.

Singh, K.M. (1989). Problem and Prospects of Environmental Pollution in India. Mittal Publications, New Delhi, pp. 12-31.

Tripathi, G. (1997). A biomolecular model for environmental adaptations in animals. In press.

Tripathi, G., Rai, S.N. & Singh, J. (1995). Ecology and vermitechnology of some Indian earthworms. In: International Conference on sustainable Agriculture, Environment, C.C.S. Haryana Agriculture University, Hisar, p. 92.