

The Underlying Causes of Environmental Degradation

37. Environmental degradation is a result of the dynamic inter play of socio-economic, institutional and technological activities. Environmental changes may be driven by many factors including economic growth, population growth, urbanization, intensification of agriculture, rising energy use and transportation. Poverty still remains a problem at the root of several environmental problems.

Social Factors

Population

38. 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 programmes, 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.

39. India supports 17 per cent of the world population on just 2.4 per cent of world land area. It's current rate of population growth at 1.85 per cent continues to pose a persistent population challenge. In view of the linkages between population and environment, a vigorous drive for population control need hardly be over emphasised.

Poverty

40. Poverty is said to be both cause and effect of environmental degradation. The circular link between poverty and environment is an extremely complex phenomenon. Inequality may foster unsustainability because the poor, who rely on natural resources more than the rich, deplete natural resources faster as they have no real prospects of gaining access to other types of resources. Moreover, degraded environment can accelerate the process of impoverishment, again because the poor depend directly on natural assets. Although there has been a significant drop in the poverty ratio in the country from 55 percent in 1973 to 36 percent in 1993-94, the absolute number of poor have,

however, remained constant at around 320 million over the years. An acceleration in poverty alleviation is imperative to break this link between poverty and the environment.

Urbanisation

41. Lack of opportunities for gainful employment in villages and the ecological stresses is leading to an ever increasing movement of poor families to towns. Mega cities are emerging and urban slums are expanding. There has been an eightfold increase in urban population over 1901-1991. During the past two decades of 1971-91, India's urban population has doubled from 109 million to 218 million and is estimated to reach 300 million by 2000 AD.

42. Such rapid and unplanned expansion of cities has resulted in degradation of urban environment. It has widened the gap between demand and supply of infrastructural services such as energy, housing, transport, communication, education, water supply and sewerage and recreational amenities, thus depleting the precious environmental resource base of the cities. The result is the growing trend in deterioration of air and water quality, generation of wastes, the proliferation of slums and undesirable land use changes, all of which contribute to urban poverty.

Economic Factors

43. To a large extent, environmental degradation is the result of market failure, that is, the non existent or poorly functioning markets for environmental goods and services. In this context, environmental degradation is a particular case of consumption or production externalities reflected by divergence between private and social costs (or benefits). Lack of well defined property rights may be one of the reasons for such market failure. On the other hand, Market distortions created by price controls and subsidies may aggravate the achievement of environmental objectives.

44. The level and pattern of economic development also affect the nature of environmental problems. India's development objectives have consistently emphasised the promotion of policies and programmes for economic growth and social welfare. Between 1994-95 and 1997-98, the Indian economy has grown a little over 7 per cent per annum: the growth of industrial production and manufacturing averaging higher at 8.4 per cent and 8.9 per

cent respectively during these years. The manufacturing technology adopted by most of the industries has placed a heavy load on environment especially through intensive resource and energy use, as is evident in natural resource depletion (fossil fuel, minerals, timber), water, air and land contamination, health hazards and degradation of natural eco-systems. With high proportion fossil fuel as the main source of industrial energy and major air polluting industries such as iron and steel, fertilizers and cement growing, industrial sources have contributed to a relatively high share in air pollution. Large quantities of industrial and hazardous wastes brought about by expansion of chemical based industry has compounded the wastes management problem with serious environmental health implications.

45. Transport activities have a wide variety of effects on the environment such as air pollution, noise from road traffic and oil spills from marine shipping. Transport infrastructure in India has expanded considerably in terms of network and services. Thus, road transport accounts for a major share of air pollution load in cities such as Delhi. Port and harbor projects mainly impact on sensitive coastal eco systems. Their construction affects hydrology, surface water quality, fisheries, coral reefs and mangroves to varying degrees.

46. Direct impacts of agricultural development on the environment arise from farming activities which contribute to soil erosion, land salination and loss of nutrients. The spread of green revolution has been accompanied by over exploitation of land and water resources, and use of fertilizers and pesticides have increased many fold. Shifting cultivation has also been an important cause of land degradation. 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 salination, alkalization and water logging.

Institutional Factors

47. The Ministry of Environment & Forests (MOEF) in the Government is responsible for protection, conservation and development of environment. The Ministry works in close collaboration with other Ministries, State Governments, Pollution Control Boards and a number of scientific and technical institutions, universities, non-Governmental organisations etc.

48. Environment (Protection) Act, 1986 is the key legislation governing environment management. Other important legislations in the area include the Forest (Conservation) Act, 1980 and the Wildlife (Protection) Act, 1972. The weakness of the existing system lies in the enforcement capabilities of environmental institutions, both at the centre and the state. There is no effective coordination amongst various Ministries/Institutions regarding integration of environmental concerns at the inception/planning stage of the project. Current policies are also fragmented across several Government agencies with differing policy mandates. Lack of trained personnel and comprehensive database delay many projects. Most of the State Government institutions are relatively small suffering from inadequacy of technical staff and resources. Although overall quality of Environmental Impact Assessment (EIA) studies and the effective implementation of the EIA process have improved over the years, institutional strengthening measures such as training of key professionals and staffing with proper technical persons are needed to make the EIA procedure a more effective instrument for environment protection and sustainable development.