

The the "biotic"  
environment consists  
of living



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The environment has two main aspects, viz. ' abiotic' and the ' biotic'.

Physical and non-living chemical aspects which influence the living organisms are included in the category ' biotic'. These factors are soil, water and the atmosphere as well as energy from various sources, such as sound, pressure, gravity, etc. On the other hand, the " biotic" environment consists of living organisms which interact with each other and are inseparably linked with their biotic environment. The biotic environment includes factors like density of population, birth rate, death rate, life expectancy, age distribution etc. The pollution of the environment is largely caused by water, air or soil pollution. In fact, water and air are the fundamental media in which life exists.

Water covers nearly 70 per cent of the earth's surface. When water is contaminated by any foreign matter-natural or artificial-it causes deleterious effects either due to their toxic nature or reduction of normal oxygen level, or aesthetically. Oils, greases, toxic compounds like cyanides, chromium, ammonia, arsenic, etc. pollute the water. Polluted water is responsible for many water-borne diseases like cholera, jaundice, typhoid, dermatitis, etc. More than 80 per cent of Indians suffer from water-borne diseases. Nearly 16 per cent of patients affected by these diseases are estimated to die annually. Following the Bhopal Gas Tragedy of December, 1984, which took a heavy toll of human life, the Government of India has enlarged the list of high' pollution industries by including the fermentation and electroplating industries.

The letters of intent of these industries are now converted into licenses only after these industries fulfill the prescribed environmental conditions. Also, feasibility studies of new industries will include aspects like pollution control equipment etc. The number of polluting industries in India is quite large. The other cause of environmental pollution is air.

Air gets polluted by (i) domestic smoke, (ii) industrial exhaust, and (iii) automobile exhaust. Smoke, harmful gases, radioactive fallout, unburnt hydrocarbons make the situation worse. Carbon monoxide, though not toxic, is the most harmful of all automobile pollutants.

Nitrogen oxide, another product of automobile exhaust emissions, damages the nose, eyes and lungs. For example, in Kolkata, more than 60% of the people suffer from respiratory disorders because of high atmospheric pollution level. According to an estimate, this city emits 1, 299 tonnes of toxic effluents every day. That is why some environmental experts consider Kolkata as a virtual gas chamber. The condition in India is quite alarming. Nearly 70% of all the available water in India is polluted.

During the last decade, the incidence of blood cancer and lymphnode cancer has increased by 5 times. About 53% of India's land area is facing serious environmental degradation. Deforestation, siltation, water, air and noise pollution, insanitation, etc. are posing a great threat to the quality of life in India. The Government is alive to the need of prevention and control of environmental pollution.

Problems and issues related to the environment received the direct attention of the Government of India for the first time during the Fourth Five Year Plan.

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In November 1980, the Government set up a Department of Environment for planning, promotion and co-ordination of environmental programmes in the country. This Department is also responsible for promotion of research, environment impact assessment, environment education and training, development of an environment information system, formulation of a national conservation strategy, etc.

Acts have been promulgated for the prevention and control of air and water pollution, i. e. Prevention and Control of Water Act, 1974 and of Air (1981) and also the Water Cess Act, 1977. In May, 1986, the Parliament also passed the Environment (Protection) Bill, 1986. This would enable better co-ordination in the activities of various regulatory agencies, creation of an authority with adequate powers to protect the environment and 'deterrent' punishment to those endangering it.

If this Bill is implemented vigorously, the people of India can hope to breathe in fresh air and drink clean water. It is also up to the people themselves to maintain sanitation wherever they live or work and thus ensure a pollution-free atmosphere. Among the proposals for funding the costs of adapting to climate change at the ongoing UN inter-governmental meeting in Bonn is one by G77 and China. The proposal would amount to between 0.5 to 1% of GDP, mostly borne by industrial countries.

According to the international NGO Greenpeace, this would amount to over \$100 billion a year up to 2020, in addition to aid. However, this group of 130 countries wants the fund to be managed by a more democratic institution than the Global Environmental Facility and the World Bank in Washington.

They expect developing countries, which will be worst hit by climate change, to be equally represented on the board.

Climate change could cost the global economy almost \$7 trillion by 2050 equal to a 20% fall in growth - if no action is taken on greenhouse gas emissions. Yet according to the study by an economist Sir Nicholas Stern, taking action now could cost just 1% - \$350 billion of global GDP.