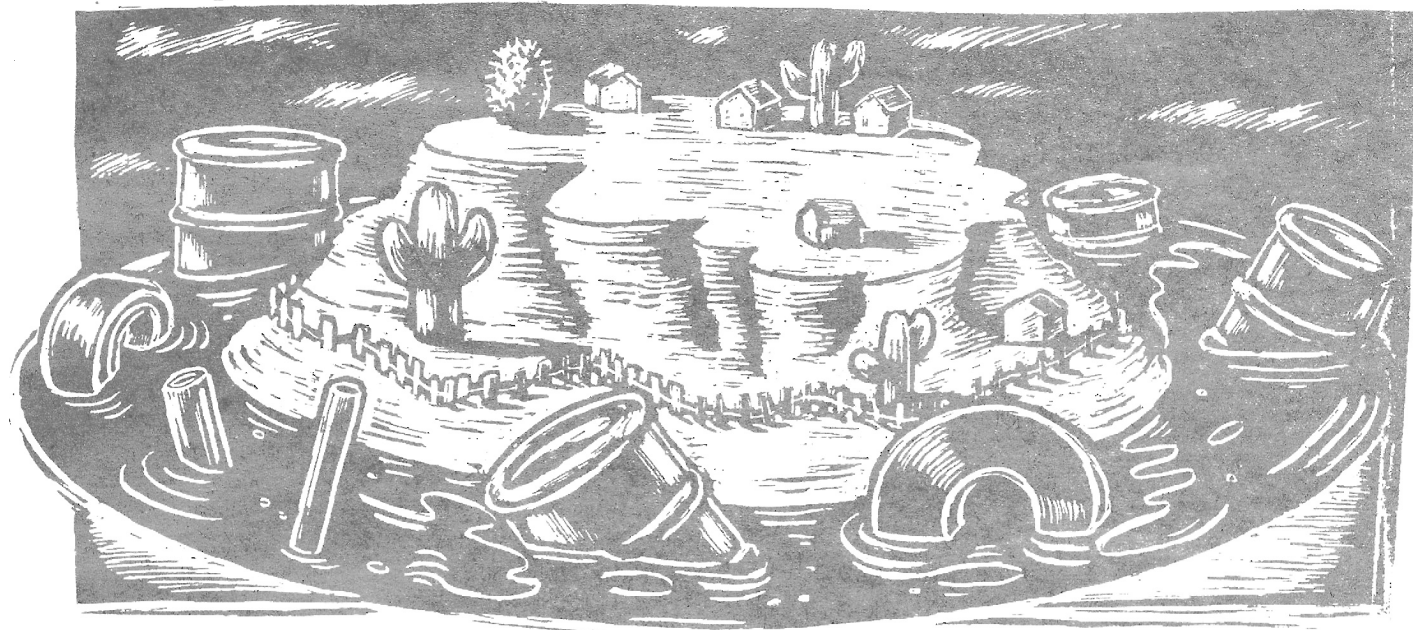




ENVIRONMENTAL POLLUTION

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The term environment denotes all living and non living entities within the human habitat. There are two aspects to the environment as natural and cultural. Land, water, soil, plants and animals belong to the first category, while what is called the cultural environment is the environment constructed by man to fulfil human requirements. Religions, artistic creations, customs, behavioural qualities, roadways, buildings and social organi-

zations are features of this aspect. Man from ancient times up to the construction of the present has necessarily brought about changes in the natural environment in fashioning his civilization and in advancing it.

Accordingly, material and energy are constantly added to the environment through certain activities of man. Thereby the environment undergoes physical and chemical changes. If such

changes cause some damage to the quality of life in the area, it is environmental pollution. The main cause of modern environmental pollution has been the adverse effect of the industrial revolution of the 18th century. When we consider an environment we see an interrelationship which has developed between its plants, animals and the ecology. The sustainability of an ecological system depends on ecological balance. Herein we should pay greater

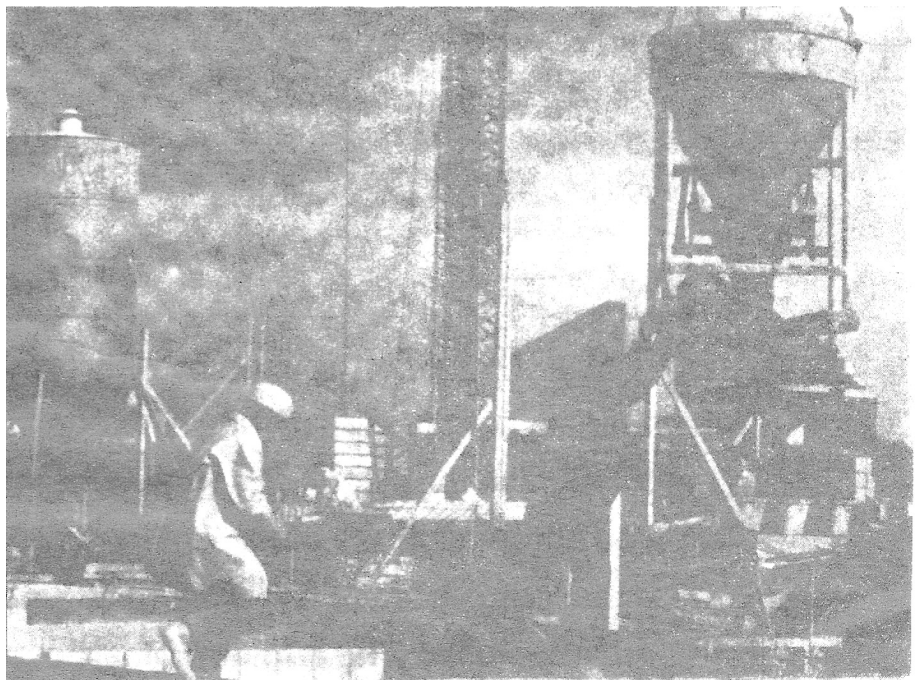
attention to air, water and soil which belong to the biosphere and in addition, to food and physical appearance etc.. Substances such as gaseous materials, solids and particles which exist in the air and energies such as heat, light, sound and radio active rays, could be identified as substances that are added to the environment through human activities. Living organisms could tolerate such sources of energy only up to a certain limit. It is due to this reason that the effluent from the boiler in a factory, when released into waterways makes it difficult for water plants, algae, fish etc. to survive. It shows that in this instance, heat has played the dominant role. Also the sound emanating from industrial areas due to industrialization and from trains, aeroplanes etc. also cause great stress. Human beings could tolerate only up to 50 decibels of this sound. Sounds exceeding this limit can impair hearing and cause deafness and also affect the nervous system. The indicates that there is a limit to the volume of sound that could be tolerated by living beings.

When we consider living organisms existing in a polluted environment, we could see a number of basic changes. The extinction of certain species which originally existed in the environment, extensive invasion of the environment by species which did not exist at the beginning, reduction in the total number of species, shortening of food chains, simplification of grids, are some such changes. Man, for his survival, should maintain the required ecological balance. However due to the changing nature of the environment, its balance is constantly disrupted. Such disruptions in ecological balance is the main cause of environmental pollution. Ecological balance is lost due to diverse human activities such as deforestation, construction of irrigation works, factories and cities, reclamation of marsh lands and through natural phenomena such as floods, cyclones, landslides, sand storms and volcanoes. Air, water, and land pollution takes place as indirect effects of these factors.

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As the countries in the world progress in science and technology, pollution has become a common place occurrence. Pollution of the environment through gases such as those emitted from factories, vehicles etc. and through compounds such as perfumes, insecticides and aerosols etc. is prevalent at present.

due to this, the ozone layer is damaged causing rays to fall directly on to earth leading to skin ailments and dangerous diseases such as cancer. In addition to this, due to the pollution which is caused by nuclear technology, from material such as nuclear fall out and ultra radiation, sicknesses such as cancers in the



Environmental Pollution by Industry

thyroid gland, lungs, breasts, the liver and kidneys etc. and cataract, hair dropping, damages to bone marrow, loss of immunity, genetic mutations in reproductory cells, brain damage, destruction of sections of the digestive system takes place. Increased temperature of the atmosphere, green house effect, destruction of ancient monuments are observed effects of the fumes mentioned above.

Water pollution caused by short sighted and indiscriminate acts of man is rampant today. People today are trying to achieve their ends at a minimum cost even through it may be at the expense of the environment. It is with this intention that people today are bent on setting up factories close to reservoirs. The addition of large quantities of effluent from garment, leather tanning, and chemical factories in turn create human hazards.

The disease called 'minimata' which affects man is a good example for this. The draining of chemical fertilizers into reservoirs and their concentration and subsequent is another consequence of water pollution. Other than this the water is also contaminated through such means as the washing of oil barges, and the addition of animal excreta and other waste materials to water.

Furthermore water, land and air are all polluted today by radiation. Soil is contaminated by the collection of garbage, introduction of chemical substances into the soil, loosening of the soil during agricultural activities, dumping of non-degradable material such as polythene, plastics and rubber onto the soil thereby reducing the space available for useful organisms, destruction of benevolent organisms and soil degradation. These affect the growth and harvests of crops.

Accordingly the natural environment could be protected through measures such as spreading the conservation concept through students, including the environmental conservation factor in the curricula from the lowest to the highest grade in school, creating public awareness through mass media, finding ways of turning contaminated by-products into useful products, taking steps to convert combustion fumes into harmless compounds, using substitute aerosol compounds, the use of compost manure produced out of waste materials in place of chemical fertilizers, introduction of recycling methods such as the production of biogas from accumulated animal waste, breeding of nitrogen fixing bacteria in the soil and thereby reducing the application of inorganic fertilizers, use of biological control in place of pesticides, using prescribed concentrations of spraying materials, measures to re-

duce the use of non biodegradable materials, adoption of soil conservation methods, improvement of drainage, conservation of the natural flora wherever possible, prevention of the ill effects from bare lands etc., establishing standardization sectors, adoption of proper hygienic practices, for the purpose of controlling the existing and probable ill effects of environmental pollution.

We have so far considered the areas which mainly affect ecological pollution. However, the degradation in the cultural environment too deserves attention since this too is taking place on a large scale today. Its degradation leads to changes in the social environment. Cultural values and moral qualities are thereby degenerated. Urbanization and tourism can be cited as the main factor contributing to this. This environment is also polluted due to the warped behaviour patterns resulting from addiction to drugs such as Marijuana and LSD. It is our duty to formulate laws to prevent these distortions and implement them in order to safe guard human ethics and cultural values and bring about attitudinal changes and thereby protect the cultural environment and protect the natural environment and thereafter turn this earth into a suitable haven for human civilization.

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