

# SCIENCE AND CULTURE

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## MANAGING ENVIRONMENT

**E**NVIRONMENTAL problems are commonly looked upon as the problems of surroundings and primarily focus on the proximate causes of environmental degradation like production of toxins, emission of greenhouse gases and pollution of water. They would also include depletion of a number of resources, like water, that is essential for human life. In fact in the next century water will become a strategic resource. Prevention of such degradation looks for scientific and technological solutions but overlooks any social aspect causing environmental degradation. Forget about reversing the ecological degradation, immense changes are required just to prevent the present ecological degradation. For example, to stabilize greenhouse gas emissions at twice the pre-industrial levels would require a 50 percent reduction in global carbon dioxide emissions. Just to stabilize the atmospheric concentration of greenhouse gases at current levels would require reducing worldwide carbon dioxide emissions by a factor of 5 or 6. This would entail major change in our energy and transportation infrastructures, which will be very difficult to implement.

The major challenge faced by society is to anticipate or recognise the point at which environment is being badly damaged by demands placed upon it and to find the political, economic and social means to respond to the damage accordingly. In recent years a new approach to look at the driving forces and not the proximate causes of environmental degradation has emerged which looked at environmental degradation from a new dimensions : a scientific inquiry into environment and societal relations. It has been argued by social scientists that focussing only on the proximate causes of the environmental degradation can not be the complete solution to environment degradation. According to them, most measures are little more than cosmetic as compared to the magnitude of problems. And to mitigate ecological degradation, an analysis of the same must be

based on understanding of the social processes where these problems originate.

Ecological destruction appears to go on indefinitely without any sign of abatement. Each year since 1984, the Worldwatch Institute has been publishing a report on ecological conditions of the world. An analysis of such trend shows continuing deterioration from year to year. For humans, the cumulative result of ecological degradation is an overall decline in the quality of life and in life expectancy.

Questions about preservation of the natural environment are not just technical questions. They are also about what defines good and moral life, and about the essence and the meaning of our existence. Hence, these are not just academic or technical matters, to be settled in elite dialogues between experts. These are fundamental questions defining what our human community is and how it should exist. A great tool for change is people themselves. In a democratic society, this requires participation of all citizens in a discussion which entails shifts in the conditions under which decisions about the natural environment are made to ensure that all voices are heard. In this way, we can develop the means by which our society can adjudicate these competing value systems in a rational and democratic manner and can develop a dialogue about biodiversity that is competent, moral and authentic. According to David Nelson, an expert on environment management, who spent 14 years as an environmental consultant in Asia and spent several months in India in recent years to assess what we have and what we need in managing environment, "If the public is empowered, in an aboveboard and in a genuine way, my belief and experience is that they become true partners for environmental change and they are not the adversaries that they are perceived to be."

This requires a strong environmental movement along democratic lines involving people, academics, government

and non-government organisations. David Nelson observed "there are many excellent scientists, engineers and researchers in India, but they are in different organisations and they have collected different kinds of information. Frequently that information isn't shared." For example state pollution control boards, Central Pollution Control Board, the Ministry of Environment did their independent studies and prepared their own data bases with very little or no coordination to exchange information. What is needed is to put all information in a national information system that is accessible to all. With the use of computers and the Internet, transfer of information could be a great leveler in environment matters. He expressed great respect for Indian NGOs for their dedication in the face of daunting challenges; some of them according to him are 'world class'. But more involvement of voluntary institutions outside the direct control of industry or government in some cases can play a major role in forming a civil society. This also requires development of personal capacities to acquire sufficient ecological knowledge to be an 'ecological citizen' and to participate effectively in collective decision making.

The task of developing an ecologically sustainable society is a major challenge faced by social institutions everywhere. By no means is this an easy project to accomplish. There does not exist a single set of actions or a programme which can guarantee the development of a sustainable society. In the United States of America, the environmental movement is one of the largest social movements comparable to the civil rights or the peace movement. The total number of environmental organisations in USA is estimated to be about 10,000 which is a few times larger than that we have in India. There has been incremental progress in reversing some of the worst forms of visible pollution by actions taken by the USA in the last 30 years. However, it pales in comparison to the changes that are needed. Considering the scale of illiteracy and other social problems that exist in our country, the task will be enormously difficult for India. It requires immediate attention and action before it is too late since time is flowing out fast. □

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