

# The Global Environmental Debate

**SHEKHAR SINGH**

**Lecturer**

**Indian Institute of Public Administration  
New Delhi**

**THE INDIAN INSTITUTE OF PUBLIC ADMINISTRATION  
INDRAPRASTHA ESTATE, RING ROAD, NEW DELHI-110002**

## THE GLOBAL ENVIRONMENTAL DEBATE \*

SHEKHAR SINGH

ARE WE, as a species, destroying ourselves and the Earth? This has emerged as a primary concern of the twentieth century, and manifested itself in an increasingly articulate debate on the environment. There is hardly a society or country today which is not involved in one way or another in this debate. From small, local, grassroots organisations to national governments and global and international bodies, this debate is becoming among the most strident of the century.

The global environmental debate is focused on certain specific environmental problems that are facing humanity.<sup>1</sup> Chief among these are the rapid destruction of numerous ecosystems, the relentless degradation of many others and the consequent loss of genetic diversity.<sup>2</sup> Human activities, especially those related to war, industry, modern agriculture, and power generation have also created extremely hazardous situations. These threaten the life and well-being of all living creatures both through slow regular poisoning, and sudden catastrophic calamities.

### THE INDIAN DEBATE

Respect for all life is a part of Indian philosophies from as far back as there is recorded history. Hinduism, Buddhism and Jainism all preached non-violence and reverence for living creatures. The much quoted Ashoka edicts were an exemplification of this philosophy.<sup>3</sup>

In a different tradition, the Khāsi tribals living in the North Eastern parts of India, as indeed many other communities in India, have maintained, even till today, 'sacred groves', where no disturbance was allowed and even the carrying away of a twig or a leaf was forbidden.

Despite this, in the first half of the the twentieth century much of the environmental debate in India, such as there was, followed the trends set by the colonial masters. Conservationists were pre-occupied with game and fish, and the stocking of hunting compartments.

\* In writing this paper I have benefited greatly from discussions with Professor Madhu Suri Prakash. I am also grateful for comments on an earlier draft by Ashish Kothari, Pranab Banerji, Miloon Kothari and Uma Bordoloi.

It was only in the late seventies that environmental issues began to be seen as central to the struggle for social justice. Around the same time movements like the *Chipko* movement, and other struggles for access to, and control over, forests and other natural resources were beginning to be recognised as constituents of the true environmental struggle in India. Of course, many of the leading participants in these struggles did not see themselves, at least not initially, as environmentalists. But it was the 'environmentalists' who were discovering that what they were really concerned about were the sorts of questions that were central to these struggles.

The beginning of the eighties saw the redefining of the environmental debate, at least in India, and issues of social justice, as reflected in the inequitable distribution of natural resources, and preferential access to them, emerged as the major issues.<sup>4</sup>

This did not essentially change the work of grass-roots organisations which, without being conscious of the larger environmental debate, were already tackling these issues. The new consciousness was mainly among the urban educated, who attached the label of 'environmental conservation' to an age-old struggle.

A reflection of this growth in urban consciousness, and perhaps in its own turn a contributor to it, was the suddenly stepped up press and media coverage of environmental issues. This was fed and supplemented by a plethora of 'seminars' and 'workshops', and the formation of various NGOs and committees. One such committee, set up by the Government of India under the chairmanship of N.D. Tiwari, resulted in the formation, in 1980, of the Union Department of Environment.

The early eighties also saw emergence of influential, urban based, NGOs like the Environmental Services Group, the Centre for Science and Environment, the Kerala Shashtra Sahitya Parishad, and Kalpavriksh, just to name a few. It saw publication of documents which had a profound influence on the minds of the urban educated, foremost among these undoubtedly being the two "State of the Environment" reports published by the Centre for Science and Environment.<sup>5</sup>

Traditionally 'wildlife' oriented organisations, like the Bombay Natural History Society and the World Wildlife Fund - India, started coming under pressure, from their members and from the society at large, to reorient their thinking and begin participating in the wider environmental debate. The latter, infact, subsequently changed its name to "World Wide Fund for Nature".

#### GLOBAL DEBATE

Given the logic of the Indian debate, it was only a matter of time before the concerns, as defined and enunciated in India, also began to be voiced internationally. Whereas earlier concerns were mainly for the sustenance of growth, and the main culprit increase in population, the question of social and economic relations soon began to dominate even the internation-

al debates. The unjust control and consumption levels of elite countries, and of the elite classes within countries, began to be seen as the major cause of the environmental crisis.

Environmental issues stopped being defined exclusively in the western genre, and the right of poor and tribal communities to firewood, fodder, clean and adequate water, supportive ecosystems and an assured continued existence became the new issues. Those very agencies that had, at the inception of the environmental debate, posed as leaders in conservation, now started being identified as the leading villains, as they were seen to support, often perpetuate, the inequitable social order that was increasingly being recognised as the root cause of the deepening environmental crisis and the consequent threat to survival.<sup>6</sup>

### *History*

A historically parallel strand of the global environment debate was the anti-nuclear debate which foretold the sudden and macabre end of the world through a nuclear holocaust. Emerging from the horrors of Nagasaki and Hiroshima, this debate was 'fueled' by the various radiation disasters in nuclear power plants, notably Three Mile Island and, more recently, Chernobyl. Stiff and sustained opposition, especially in the west, was organised to nuclear warheads, especially against their location in NATO countries in Europe, and to the setting up of nuclear power plants.

Unfortunately, the anti-nuclear and peace movements could not, at least initially, establish a realistic link with those fighting for social justice. Though there was sympathy and camaraderie all around, there was also a feeling among many social activists that their time and energy was better spent in fighting existing social injustices rather than future potential disasters.

Efforts to link up the two issues, by arguing that the funds saved from the arms race could be well invested in poverty alleviation were impressive in their statistics. However, these did not influence committed social activists, who recognised that they were not fighting for more money, but for more justice. A popular poster of the time claimed:

When some people go hungry  
It is not food which is in  
short supply  
It is justice

In the early seventies, there emerged a fresh concern for the future of the earth. This time the critical factor was depletion of 'natural resources', and growth of the human population. In 1972, the 'Club of Rome' published a report<sup>7</sup> where they concluded :

If the present growth trends in world population, industrialisation, pollution, food production, and resource depletion continue un-

changed, the limits to growth in this planet will be reached sometime within the next one hundred years.<sup>8</sup>

This, in itself, did not sound too alarming for a hundred years was a long time, and anyway beyond the life expectancy of the present world citizenry. But their detailed arguments were more alarming, and perhaps the quote from U Thant, with which they prefaced their report, more accurately expressed their real fears :

I do not wish to seem overdramatic, but I can only conclude from the information that is available to me as Secretary-General, that the Members of the United Nations have perhaps ten years left in which to subordinate their ancient quarrels and launch a global partnership to curb the arms race, to improve the human environment, to defuse the population explosion, and to supply the required momentum to development efforts. If such a global partnership is not forged within the next decade, then I very much fear that the problems I have mentioned will have reached such staggering proportions that they will be beyond our capacity to control.<sup>9</sup>

However, the Club of Rome's report, with its 'Western' context and focus on growth, did not change the minds of those struggling with problems of poverty and injustice. The almost total blame for the environmental crisis that this report seemed to put on the growth of population also evoked sharp responses, especially from those many countries which had large and fast growing populations, but who nevertheless consumed very little of the world's resources.<sup>10</sup> In the same year, a conference on Human Environment was convened by the United Nations at Stockholm (June, 1972). Here, again, country after country spoke of the degradation and depletion of natural resources. But, again, the concern for environmental protection was seen by many as irrelevant, even antagonistic, to the concerns for social and economic development. Representatives of the less wasteful societies,<sup>11</sup> though agreeing with the need to conserve nature, saw the growing environmental debate as another way in which the more wasteful societies were attempting to thwart their legitimate aspirations for growth and development. Affluent 'greens' were accused by even British politicians of wanting to "kick the ladder down behind them".<sup>12</sup>

The late Indian Prime Minister, Indira Gandhi, while addressing the plenary session of the conference, said :

On the one hand the rich look askance at our continuing poverty - on the other, they warn us against their own methods. We do not wish to impoverish the environment any further and yet we cannot for a moment forget the grim poverty of large numbers of people. Are not poverty and need the greatest polluters?

I am reminded of an incident in one of our tribal areas. The vociferous demand of elder tribal chiefs that their customs should be left undis-



turbed found support from noted anthropologists. In its anxiety that the majority should not submerge the many ethnic, racial and cultural groups in our country, the Government of India largely accepted this advice. I was amongst those who entirely approved. However, a visit to remote part of our north-east frontier brought me in touch with a different point of view --- the protest of the younger elements that while the rest of India was on the way to modernisation they were being preserved as museum pieces. Could we not say the same to the affluent nations?<sup>13</sup>

Interestingly, the Second Club of Rome Report published three years later<sup>14</sup> developed the same arguments as put forward in the first report, with two differences. First, the new report supported these arguments with disaggregated region wise data, unlike its predecessor, which spoke of the world as a whole. Secondly, it relied heavily on the 'systems approach', with elaborate flow-charts and graphs to illustrate the "systemic" solutions. Understandably, this report did not evoke a response very different to that of its predecessor.

By the beginning of this decade the role that the Club of Rome had appropriated to itself, of being the world's environmental watchdog, was usurped by international organisations having much closer links with the centers of power.

In 1980, the International Union for Conservation of Nature and Natural Resources (IUCN), the United Nations Environmental Programme, and the World Wildlife Fund joined hands to bring out a World Conservation Strategy.<sup>15</sup>

In this World Conservation Strategy, the emphasis was shifted from crude population growth figures to a recognition that the 'affluent' nations consumed (and wasted) much more than the 'not so affluent'. This point was very effectively made by publishing a graphic representation where one Swiss was shown as equivalent to 40 Somalis in consuming resources.

However, in the action plans emanating from this strategy, the thrust remained on 'systemic' remedies of better laws, better education, greater awareness, etc., without even a mention of the 'affluent' first cutting down their own consumption levels.<sup>16</sup>

It took another seven years for the next 'World report' on the environment to appear, this time the "Brundtland Report". This report emanated from the World Commission on Environment and Development, set up by the United Nations in 1984, under the chairpersonship of Gro Harlem Brundtland, present Prime Minister of Norway. The Commission's report, titled *Our Common Future*, was published in 1987.<sup>17</sup>

Perhaps because the commission members represented almost all the significant sections of the world, the rich and the poor, the east and the west, the capitalists and the socialists, this report produced what must so far be the most wide-ranging statement on the world's environmental crisis. It mentioned almost all points of views, and showed a rare sensitivity to a surprisingly diverse set of values. However, perhaps because of this

very breadth, no clear action plan seemed to emerge. Global environmental rhetoric, with this report, had come of age, but global environmental action still lagged far behind.

#### *Current Situation*

But neither in India, nor in the rest of the world, has the new order totally replaced the old. Though it is true that more and more individuals, institutions and governments are being forced to adopt an 'environmental stand', the different interests and perceptions that have divided the world in the past are also becoming manifest in the environmental debate. At the far end of this decade, one can see a world community which is talking more and more about the environmental crisis, but agreeing less and less on what it means, on how it came about and, indeed, on the solutions.

#### MAJOR ISSUES

The contemporary world situation is marked by a multiplicity of environmental philosophies, each claiming legitimacy within one or another world view. Efforts have been made to classify these in different ways.<sup>18</sup> There are the 'Marxist' environmentalists, the 'capitalist' environmentalists, the 'Gandhian' environmentalists and, of course, the 'extremist' environmentalists. In an attempt to escape from such classifications, the Greens of Germany have been quoted as saying: "We are neither right nor left, but in front".<sup>19</sup>

There are others who have escaped the classical categorisations and are more known for the views they hold than for their resemblance with existing world-views. Among them, deep ecologists are those who believe that both human and non-human life has inherent value. They hold, among other things, that for the flourishing of non-human life it is essential that human populations decrease.<sup>20</sup> Without being called deep ecologists, there are many others who stress on the ethical rights of animals and on the essential immorality of the current interactions between humans and the rest of nature.<sup>21</sup>

There are the 'social ecologists' who focuss on the socio-political structures existing today and stress that environmental problems can be solved only by changing these structures.<sup>22</sup>

The eco-feminists are trying to highlight the feminist issues relevant to the environment debate and argue that the ecological movement is essentially a feminist movement. According to them :

Ecology assigns equal importance to all organic and inorganic components in the structure of an ecosystem....Similarly, feminism asserts the equality of men and women. Intellectual differences are human differences rather than gender-or race-specific.<sup>23</sup>

There are even those, like Julian L. Simon, who argue that there is no environmental crisis and, in fact, availability of food and energy, and life expectancy, are progressively becoming better.<sup>24</sup>

As these and many other environmental positions are already well documented, and too complex to be profitably described in passing, it seems more useful to look at some of the underlying issues. Needless to say, there are many more issues in the debate than are discussed here. However, from the somewhat restricted perspective of the current 'developmental debate', or at least its more dominant strand, the issues being discussed appear to be among those most immediately relevant.

### *Sustainability*

Considering human beings are as much creatures of nature as any other animal or any plant, it seems *prima facie* implausible that they could deplete nature to a point where all life gets threatened. Surely, the natural order and the laws of nature must have accounted for human beings and their needs.<sup>25</sup>

Plausibly human beings, as hunter gatherers of the past, were governed by nature's rules. Even today, isolated tribal groups having no contact with 'civilization', like the North Sentinalese and Jaravas of the Andaman Islands, seem to face no crisis of sustainability.

However, an inherent part of modernity, as we know it, seems to involve changes in our interaction with, and use of, nature's elements. It seems to involve the colonisation of more and more of the earth, taking it over from other creatures and manipulating it to progressively suit our own requirements. Modern civilisation has increasingly discovered methods of immunising itself against the vagaries of nature, of consuming at a growing rate the 'resources' that nature offers. Most important, modern civilisation views nature with eyes of utility: treating it as nothing more than one more 'raw material' for industries and economic models.

Modern science gives us the arrogance, technology the means, increasing population the alibi, and poverty the justification to destroy nature. Add to these the world's social and economic order that enables a few to dispossess the many, and you have the recipe for a crisis of sustainability.

But what is it that is sought to be sustained? Clearly there are at least two answers to this.

First, there are those who, according to Wolfgang Sachs, focus attention on 'the impact of ecological destruction upon economic prospects; not nature but growth has to be sustained.'<sup>26</sup> To them, everything must subserve economic growth, and they feel betrayed by nature which, like errant workers in a factory, threatens to go on strike just when growth is accelerating and the world is poised at new horizons in production and consumption.

Then there are those who argue that far from sustaining growth, it is becoming difficult to even sustain the present standards of life for a majority of humanity. These more "down-to-earth" environmentalists



point to the rapidly degrading land, water and forests and argue that the highly wasteful life styles of a few countries and individuals is depriving the many of even basic necessities. To them, the consumption of a few is making it difficult to sustain even the minimal subsistence of the many.

To these people, sustainability involves the sustenance of nature, which is essential as a life-support systems. It also means the sustenance of cultures, of human diversity, of values, and of a freedom to choose. Rajni Kothari, a powerful spokesperson for such a view (along with Ivan Illich and Gustavo Esteva), puts the environmental debate in perspective when he says :

The conflict used to be posed as between 'environment' and 'development.' I prefer to pose it as a conflict between two meanings of sustainability, because sustainability has become everyone's catchword, even while it means entirely different things to different people.<sup>27</sup>

#### *Population*

The current global lifestyle is not sustainable. This means that humans are consuming faster than the earth can replenish, and dumping wastes faster than the earth can assimilate.

A school of thought blames this totally on the growth of human population. The increased rate and quantity of consumption is argued to be directly proportionate to the increase in human numbers. However, this argument does not take into consideration the variations in the consumption patterns of individuals.<sup>28</sup> It mistakes 'individuals' with consumption units. One could argue that even if the population of the world was reduced by 25 per cent, if the reduction was 30 per cent in the least consuming segments of society, and there was an increase of 5 per cent in the highest consuming segments, global sustainability would become much worse.

#### *Technology*

There is another school of thought which argues that the crisis is due to the progressive growth of technology and the resultant consumerism and waste that has crept into human society. It is further argued that the ability human beings gained, through technology, to feed growing numbers more assuredly, and to immunise or cure themselves from numerous diseases, has undoubtedly contributed to the rise in human population. Added to this, technology has also enabled human beings to use natural resources for an increasing variety of things, at a rate and quantity that would have been undreamt of even a hundred years ago.

In response, it is argued that though technologies of extraction, production and consumption, and consequently of waste and degradation, have predominated our history, these have developed in a particular socio-economic milieu. They have reflected the perceptions and felt needs of certain sections of the human society and the social relations therein.

The environmental crisis has more recently started generating technologies of conservation, regeneration, recycling and frugality. Though such technologies are still far behind those of extraction, production and consumption, this is only because social priorities have not changed enough. The influence of private profits is still far greater than that of social welfare, and public awareness has not yet made pollution and environmental degradation unprofitable, nor conservation and regeneration profitable.

In short, technology that has so far been used to deplete and degrade the earth could now be used to conserve and regenerate it. All that is required is the non-availability of softer, short-term options, and the resultant acceptance of long term, sustainable, ones.

This, it is argued, would meet the demand for sustainability. But would it promote equity? Would it not allow a small number of elite to keep their needs and consumption growing, even though regenerative technology kept pace, while freezing a large part of humanity to base, subsistence levels?

Would it not also continue the pattern where countries and regions are selectively despoiled, only to be abandoned? According to Wolfgang Sachs:

The proposed policies of resource management, I am afraid, ignore the option of intelligent self-limitation and reduce ecology to a higher form of efficiency. Such a reductionism, I claim, implicitly affirms the universal validity of the economic world-view and will eventually spread further the westernization of minds and habits, a cultural fall out that in the long run also endangers the overall goal of sustainability.<sup>29</sup>

Identifying various western institutions with such views, he goes on to say, of one of them:

Indeed, if one were to suggest a motto to be engraved above the entrance of the Worldwatch Institute, the obvious choice would be "More out of Less."<sup>30</sup>

### *Economics*

Can the world, especially the poor, afford environmental conservation? Can they afford the investment that pollution control requires, or the loss of revenue that conservation of forests and other ecosystems implies?

These questions emanate from our existing economic systems where human made goods have economic value, even if they are practically useless, while natural elements have no value, even though they might be critical to all life.

Economics has traditionally been weak in calculating what are called 'public costs'. The predominant stress of economists, at least neo-classical economists, has been on 'private costs'. Further, economics seems to be able to deal with only those 'goods and services' which are, in one way or another, inputs to, or products of, 'economic activities'. Therefore, the cost of soil-erosion can only be measured in terms of the resultant 'loss of

agricultural produce'; or the cost of clay in terms of how many clay pots could be produced from it. But when 'goods' are essential for 'natural processes', then it becomes difficult to compute economic costs.

What is the cost of a tree which cleans air, regulates water-flows, fixes nitrogen, absorbs pollutants, produces biomass and provides habitat to other flora and fauna? At best, economists can compute 'replacement costs' of those of these functions that are replaceable. Replacement cost of firewood can be computed in terms of coal equivalent energy produced through 'economic activities' like generation of electricity, or mining of fossil fuels. But what happens to the 'irreplaceable'. They become priceless and, therefore, go out of economic calculations. Unfortunately, much of nature is irreplaceable, and therefore priceless.

There is a demand by some environmentalists that economic costs should be fixed for all environmental parameters, even though economics as a science has inherent inadequacies in determining costs outside the realm of 'economic activities'. But there are other environmentalists who question the necessity of all decisions being reduced finally to economic decisions. They consider this to be a cultural distortion and argue that rather than reducing nature to an economic entity, we should develop our abilities to value nature independently and make decisions based on such an evaluation.

The question, therefore, is not whether we can afford to conserve nature, but rather, can we afford not to conserve it?

### *Equity*

In this context, what equity means is arguable. Logically, the earth should be treated as one unit, and be equitably shared among all creatures. But, despite there being a vocal opinion on animal rights, the right of non-human creatures to live is almost never acknowledged, and certainly never considered by governments while formulating policy.

However, equally contentious is the right of all human beings, irrespective of nationality, race, colour or sex, to have an equal share of the world's resources.

The division of the world into nation-states gives credibility to the generally prevalent practice of considering the resources of a country to be exclusively its own property. This is not to say that countries do not try, and often succeed, in appropriating the natural resources of other countries. It just means that each country considers itself justified in withholding free access to the natural resources located within its boundaries (and its exclusive economic zone) as best as it is able.

Equity, therefore, already gets reduced to being applied to only human beings, and only within the context of nation-states and in proportion to the strength of these nation-states.

But what happens internationally, is also reflected within these nation-states. In many countries, resources from the rural areas are appropriated by urban centres, and from the poor by the rich, often in the name of

'development' or 'national interests.'

However, the loss of genetic diversity in South America or in South-East Asia, impoverishes the whole world, rich and poor alike. The greenhouse effect threatens to inundate all coastal areas, not just those where the poor live. The depletion in the ozone layer threatens all humanity, not just the impoverished.

It is this inter-connection in nature that has confounded, perhaps for the first time in human history, efforts to pass on the costs of consumption and waste exclusively to some segments of society. International and national concerns for equity, therefore, must be understood in this context.

But even then, the call for sustainability is usually given with scant regard for equity. The effort is on to force the weak and the poor to cut down their very minimal consumption even further, so that the strong and the rich can 'sustain' their elaborate lifestyles. In the name of 'sustainable development', an effort is made to extend for a little longer the unsustainable lifestyles of a few. The graziers in Rajasthan, the women foraging for fuel in Bihar, the tribals in Brazil's rain forests, the Kalaharis in Botswana, are all being told that their lifestyles are not sustainable, and that the world cannot allow them to destroy the forests. But no real alternatives are offered to them. There is no alternative world view which offers them a life with dignity. And yet they are judged to be environmentally destructive by experts and consultants who have gathered in wood paneled, air conditioned, rooms after flying across the globe in fuel guzzling jets.

Human beings, it is argued, do not give up easily, and the acceptance of genuine equity and universal sustainability is still a far cry.

#### CONCLUSIONS

In the ultimate analysis, the environmental debate can be seen as a debate about the meaning of development. Just as the growth of socialism questioned development without equity, growing environmentalism is questioning development without sustainability. And just as acceptance of equity changed the meaning of development, so also must the acceptance of sustainability.

Despite assurances that techno-managerial adjustments within the current model of development would ensure sustainability, more and more environmentalists are questioning this. While accepting that poverty is a polluter, and in any case unacceptable, the environmentalists are arguing that even affluence, as we know it today, is unsustainable.

The prevailing model of development, the environmentalists argue, can only offer poverty or affluence, and both are unsustainable. What is, therefore, required is new thinking on the meaning of development and a reorientation of those moral systems which have made material affluence the primary, sometimes the only, value in today's world.

The debate carries on.

## REFERENCES

1. As environmental statistics are now well known, they are not being repeated here. For details please see, among others, *World Resources*, brought out each year by the International Institute for Environment and Development, and World Resources Institute.
2. For a very hard hitting account of the implications of loss of genetic diversity, see, Pat Roy Mooney, *Seeds of the Earth: A Private or Public Resource?*, ICDA, 1979. The status of the management of wild genetic resources in India, as preserved in national parks and sanctuaries, has been discussed in A. Kothari, et al., *Management of National Parks and Sanctuaries in India: A Status Report*, IIPA, 1989.
3. For an account of environmental thought in traditional Hindu scriptures, see, "Hindu Concept of Ecology and the Environmental Crisis", O.P. Dwivedi, B.N. Tiwari and R.N. Tripathi, presented at the Workshop on Human Ecology, IIPA, January, 1985.
4. See, for example, Shekhar Singh, "Vested Interests", *World Focus*, Vol. IV, No.3, 1983.
5. *The State of India's Environment 1982: A Citizens Report, and The State of India's Environment 1984-85: The Second Citizen's Report*, Centre for Science and Environment.
6. For example, the IUCN and WWF were seen to promote 'Wildlife Conservation' at the cost of poor people.
7. Donella H. Meadows, et al., *The Limits to Growth*. Signet Books, 1972.
8. *Ibid.*, p.29.
9. *Ibid.*, p.21.
10. See, for example, Indira Gandhi, *Man and Environment*, Speech delivered at the Plenary session of the Conference on Human Environment, Stockholm, June 14, 1972.
11. The terms 'less wasteful' and 'more wasteful' societies are being used, in place of developing and developed, or first world and third world, as they are considered more appropriate.
12. British Labour M.P., Anthony Crosland, as quoted in "The Environment: The Policies of Posterity", *The Economist*, September 2-8, 1989, p.5.
13. Indira Gandhi, *Man and Environment*, op.cit.
14. Mihajlo Mesarovic and Eduard Pestel, *Mankind at the Turning Point*, London, Hutchinsons, 1975.
15. Robert Allen, *How to Save the World*, Corgi Books, 1980.
16. *Ibid.*, pp. 141-176.
17. *Our Common Future*, Oxford University Press, 1987.
18. See, for example, Dunu Roy in *The State of India's Environment 1984-85*, op. cit., Ramchandra Guha, "Ideological Trends in Indian Environmentalism", *Economic and Political Weekly*, December 3, 1988, pp. 2578-2581.
19. As quoted in Ramchandra Guha, op. cit., p. 2578.
20. See Arne Naess, "Deep Ecology and Ultimate Premises", *The Ecologist*, op.cit., p. 128.
21. See, for example, Peter Singer (ed.), *In Defense of Animals*, London, Basil Blackwell, 1985; and Philip P. Hanson (ed.), *Environmental Ethics: Philosophical and Policy Perspectives*, Burnaby, British Columbia, Simon Fraser University, 1986.
22. For a detailed account of 'social ecology', see Murray Bookchin, *The Ecology of Freedom*, Palo Alto, Cheshire Books, 1982.
23. Carolyn Merchant, "Feminism and Ecology", in Bill Devall and George Sessions, *Deep Ecology*, Peregrine Smith Books, 1985. See also, Vandana Shiva, *Staying Alive: Women, Ecology and Survival in India*, New Delhi, Kali for Women, 1988.
24. Julian L. Simon, *The Ultimate Resource*, Oxford, Martin Robertson, 1981.
25. For a fuller discussion on this point, see, Shekhar Singh, "Ecology and Environment", in *Ravaged Forests and Soiled Seas*, Kalpavriksh, 1989.
26. Wolfgang Sachs, *Environment* (mimeo), July 1988, p. 9.
27. Rajni Kothari, *Environment, Science and Ethics* (typescript), 1989, p. 3.
28. According to one estimate, quoted in: "Social Ecology, Deep Ecology and the Future of Green Political Thought", *The Ecologist*, 184/5, 1988, p. 137, USA with 5 to 6 per cent of the world's population, consumes over 40 per cent of the world's resources.
29. Wolfgang Sachs, "The Gospel of Global Efficiency", *ifda dossier* 68, 1988, p. 33.
30. *Ibid.*, p. 34.