Towards Global Environmental Values: Lessons from Western and Eastern Experience.[1]

PHILIP SARRE

Faculty of Social Sciences
The Open University
Walton Hall
Milton Keynes MK7 6AA, UK.

ABSTRACT: The paper argues that new environmental values are needed as the advanced industrial economy becomes global. Reviewing a range of values from hunter-gatherer, agricultural and industrial societies, the paper suggests that environmental value systems should ideally satisfy three criteria. They should be consistent with scientific understanding of natural systems, they should lead to practical ethical and political proposals and, crucially, they should inspire aesthetic responses of pleasure and awe.

Current global value systems fall short of this ideal: Gaia has the potential to combine science and awe, but lacks humane decision criteria, while sustainable development is pragmatic but environmentally minimalist and lacks aesthetic inspiration. The short term need is to integrate different strands of current positions as Hinduism combined pre-existing views. A sequence of priorities is suggested: eliminating irreversible environmental change; stabilising population change through more equitable trade; and reconsidering the boundaries, practical and aesthetic, between society and nature.

KEYWORDS: Environment, values, globalisation, sustainability, development.

INTRODUCTION

It is now widely accepted that a range of environmental issues pose serious problems to society. It is also apparent that, at Rio and elsewhere, policy changes have been inadequate even to prevent the problems getting worse. In part, the muted response has resulted from different scientific interpretations and political interests, but a major factor has been the plethora of pressure groups and value positions and the consequent failure of environmentalists to establish a united view. In parallel with work on scientific, technical and political aspects of

Environmental Values **4** (1995): 115-27

environmental issues, I believe that environmentalists need to be more explicit about the values which inspire them. It is simply not good enough to let media debates rest on the dualisms 'ecocentric versus technocentric' or 'deep green versus shallow', especially when it is strongly implied that the former are 'wrong but romantic' and the latter 'right but repulsive'.

In seeking out and evaluating environmental value positions, my own prejudice is to look for positions which have the capacity to inspire action rather than those which seek analytical precision. As a result, I have been more concerned with religion and politics than with philosophy or economics. I am encouraged in this prejudice by Brennan's (1992) recent argument that neither philosophy nor economics has solved the problems arising from conflicts between the intrinsic value of species or ecosystems and their use values for complex and fragmented societies. I have no doubt that economics will play an important part in future environmental policy, but in spite of the pioneering work of Pearce (1989) I think economics should be the means rather than the end.

The argument of this paper is that, since many of the problems are global, it is necessary to move towards values which could inspire and guide global response. This requires a new look at familiar western value systems and consideration of other cultures. In doing this, I am concerned not just to explore the range of positions which exist but to begin to clarify the criteria which can be used to assess their strengths and weaknesses, and hence to point to the characteristics of a system of values appropriate to the contemporary world.

WESTERN VALUES

The main thrust of western values, encouraged by a selective reading of the Judaeo-Christian tradition, has been towards the domination and exploitation of nature (Passmore, 1978). Just as Max Weber showed Protestantism as ideally fitted to the rise of capitalism, so the tradition of exploitation helped to launch the development of industrial society. Whether guided by the profit motive or by state socialism, industrialisation has brought unprecedented material affluence to a minority of the world's population at the cost of gross inequality between people and of substantial environmental destruction. In the process, nearly all environments have been modified and there is little wilderness left. Paradoxically, advanced industrialisation holds out both the possibility of solving environmental problems and the probability of greatly increased pollution and resource depletion. There are those who argue that industrialisation can be made environmentally sound by taxes which make polluters pay and by changing discount rates to encourage resource conservation. Others argue for more radical changes based on different value systems.

Some of these alternative value systems have very ancient roots (Pepper, 1984, Gold, 1984). I have long admired the elegance with which Glacken (1967)

teased out the different strands of thought in pre-modern Western societies. His themes of the designed earth, the influence of nature on culture and the perfectibility of the creation show that early European thinkers recognised the existence of multi-stranded relationships between society and nature. Unfortunately, because he recognised that industrialisation had stimulated new ways of thinking about society and nature, he stopped short of pursuing these themes during industrialisation, except for a brief review published just before his death and republished in 1992.

Reactions to nineteenth century industrialisation have been explored by Brown (1990), who also recognised three strands. First was a restatement of another Christian theme: the idea of *stewardship* emphasises that humans are not freehold owners of the earth but tenants, and as such they are responsible for keeping the property in good order. In the traditional concept, accountability was to God as creator, but this was taken less seriously as the century progressed and society became more secular. One of its rivals was *Utilitarianism*, explicitly designed as a rational and secular doctrine that would guide policy without recourse to religion or metaphysics. The maximisation of pleasure and minimisation of pain may have some value in allocating resources between social groups (suggesting that one group's need for survival should take precedence over another group's desire for luxuries) but minimises concern for environment as only animal pain could be relevant and even that could be solved by painless elimination. In practice, the difficulty of measuring pleasure or pain led to an emphasis on demand, which made utilitarianism an ally of market economics. Brown's third strand was *Romanticism*, with its stress on individual encounters with nature and its re-evaluation of wild places. This is the value position which goes furthest towards the aesthetic, both the beauty of the settled agricultural and pastoral landscape and the sublime challenge of the wilderness (Eagleton, 1990). Americans have long felt a more 'macho' relationship to wilderness (Nash, 1982) than is true of most Europeans, though it is now exercised in areas managed to appear to be wilderness. Many environmentalists feel initial sympathy with Romanticism, but then find that it is more of a temporary escape from industrial society than a confrontation with it.

The real confrontation, inspired by Karl Marx, was with socialism but, in spite of efforts by people like Ruskin, Morris and Kropotkin, this was essentially a social movement with little concern for the environment (Smith, 1991). Recent reexamination of Marx's concept of nature (notably Schmidt, 1971) has demonstrated that many aspects of Marx's view are persuasive, but that there are crucial flaws. On the positive side, Marx rejected any dichotomy between man and nature: man's abilities are seen as natural and nature as substantially transformed by man. Throughout history humans have laboured to produce food, clothes and other products for use and exchange. They have used their own natural strength and understanding to transform nature and have created tools, machines and technologies to increase their effectiveness. Marx characterises capitalism as

extremely productive, but as alienating labour, substituting exchange value for usefulness, and as out of human control. His advocacy of communal ownership of the means of production was intended to restore that control, to direct production to the satisfaction of basic human needs and to provide more free time for workers to pursue their own happiness – a goal reminiscent of utilitarianism. The social consequences are well known, but of central concern here are his attitudes to nature, which are encapsulated in the following extract from the Grundrisse quoted by Schmidt (1971, p.30):

> The material of nature alone, in so far as no human labour is embodied in it, in so far as it is mere material and exists independently of human labour, has no value, since value is only embodied labour.

So, although he recognised nature as antecedent to man and as internally autonomous, Marx was so preoccupied with production for human need that he could not discern any value in unexploited nature. Indeed, he was critical of Romanticism, mainly because of its conservatism, but also because he regarded its view of nature as sentimental and insufficiently aware of the struggle for survival. Redclift (1987) adds two further criticisms: not only does Marx neglect the inherent value of nature, his emphasis on production neglects the impacts of society during consumption (for example, damage to a National Park by tourists) and omits crucial questions of the reproduction of the human species. The rather singleminded valuation of production, and especially the belief that socialised society would solve the problems of capitalist production, left open the way for Stalin to embark on the transformation of society and the conquest of nature through industrialisation, collectivisation and grandiose schemes of water management. As a result, as practised in Eastern Europe, socialism had equally negative environmental effects as did capitalism.

In the West the strands recognised by Brown continued into the twentieth century but, in spite of early protest movements like the foundation of the National Trust in Britain and the Sierra Club in the USA, it is only since about 1970 that self consciously environmentalist rather than conservationist value positions have been articulated and put into practice (Jamison et al., 1990). There seems to be a negative correlation between size of membership and explicitness of value position. This suggests than environmentalism is substantially based on emotion or aesthetics rather than on rationality. Emotive issue-based campaigns, from protection of birds to whales or countryside, have recruited millions while deeply considered positions with little emotional appeal have few adherents. It is hard to see how the prescription of writers such as Arne Naess (1973) can solve the problems of urban dwellers in the developed world let alone those of Asia, Africa or Latin America. The social ecology of Murray Bookchin (1982) is carefully thought through at a local level, but like all anarchist prescriptions, sounds less convincing at a national scale let alone globally. Perhaps the most alarming manifestation of environmentalism is that of groups like Earth First! in

the USA (Tokar, 1988) or the Animal Liberation Front in the UK. Their advocacy of the rights of trees and animals seems to justify inhuman treatment of people seen as being at fault. This way lies eco-fascism, which could give rise to a form of sustainability that few of us would like.

One strand of environmentalism which is much derided is the NIMBY syndrome, where local residents oppose the siting of some nuisance 'in their backyard'. Much has been written about the hypocrisy of individuals who resist developments in their area which they are willing to see imposed on others, and of the injustice of societies which permit richer and more powerful groups to impose environmental costs on others. More optimistically, the prevalence of NIMBY responses may have two positive messages: first, they suggest that many people, and especially the more affluent, are willing to restrain damaging processes in the interests of a higher quality environment and, second, the widespread interest in protecting their own area would make many people sympathetic to regulations which gave local communities a veto over damaging developments and/or the right to demand compensation. Such regulation would make it more difficult to site polluting industries and hence encourage higher standards. The increasing trend to globalisation may erode the power of local vetos, since disbenefits can be imposed on 'far away places of which we know nothing', but could strengthen the force of NIMBYISM because so many problems are growing beyond the local scale: to protect their homes from acid rain or ultraviolet radiation affluent groups will have to support solutions to the problems rather than seeking to export it to someone else.

Perhaps the crucial test of this range of environmentalist positions is that over twenty years of campaigning pressure groups have managed to persuade most western citizens that there are serious environmental issues to be addressed but have not convinced them that solving the problems requires a change in lifestyles, values and goals. Politicians talk of the need for stewardship on behalf of future generations but continue to focus on the short term. Voters tend to vote for politicians who they hope will deliver more economic growth and higher 'standards of living' as conventionally measured. Some Green Party politicians have been elected, but their influence has been very limited. In the most successful example, the West German green party was torn apart by disputes between factions adopting fundamentalist green values and those willing to compromise to achieve minor policy changes. I think it's reasonable to conclude that current western environmental values are less than compelling.

EASTERN VALUES

It is remarkable that environmentalists have tended to admire the values of native North Americans, Australian Aborigines and rainforest dwellers rather than to study the ideas of the old civilisations of Asia. This may be because simpler

hunter-gatherer societies have been obliged to reach equilibrium with their environments, but it neglects millennia of thought and practice in the world's oldest civilisations. Indeed it is the age of these societies which generates the complexity of Asian ideas about society and nature that makes them hard for western societies to comprehend.

The logical starting point is Hinduism because of its great age and its coexistence with other religions. Some of its basic assumptions about the unity of man and nature, the coexistence of sacredness and lawfulness, and of subjectivity and objectivity seem to promise much more than Western dualisms. But the baffling proliferation of deities, the suggestion that destruction is as important as creation, and the importance of symbol and ritual (Singh, 1992) make progress difficult for an analytically trained outsider. Knowledge of environmental problems in India and Ravindra and Murray's (1991) judgement that, in spite of the appropriate values held by Indian religions, 'India's record in these matters is not enviable' leave us wondering whether progress is possible.

Pandeya (1992) alerts us to the crosscutting of two lines of argument: one that follows the evolution of Hinduism from pantheism to monotheism through the absorption of varied pre-existing cultures, the other a philosophical principle separating the conscious and the nonconscious. The pantheistic elements promote a direct reverence for nature for its own sake whereas monotheism can lead to a devaluation of nature as merely a product of and pointer to the underlying Brahman. At worst, encouraged by an ontology separating consciousness from nonconscious nature (including the human body), this seems to lead to an apathy about nature and everyday existence in favour of perfecting the conscious self in its relation to God. At best, as outlined by Balasubramian (1991) Hinduism's realist epistemology seems to have the potential of balancing the knower and the known, the spiritual and the organic, self-improvement and responsible behaviour towards nature.

The origin and significance of these cross-cutting ideas becomes much clearer on reading Gadgil and Guha's (1992) account of the ecological history of India. The encapsulation of pantheistic groups of hunter-gatherers by monotheistic cultivators not only makes sense of some of the contradictions between reverence for nature and forest clearance, it also provids a plausible account of the origins of the caste system. Their later discussion of British forest law and administration also make it clear that Indian environmental values were not the prime cause of environmental damage in the sub-continent. However, the continuation of forest exploitation by government and capital after 1947 shows that western values are easily exported. Their discussion also suggests that resistance to deforestation, including the Chipka movement, is more a social protest in which forests are being valued for use by local communities rather than an ecological protest about the value of trees per se. The variety of Hindu interpretations seems particularly susceptible to this kind of clash between local and wider priorities, and the post Independence preference for large scale

industrialisation over Ghandi's vision of local craft development suggests that it won't be easy to shift the balance.

Buddhism originated as a reaction against Hinduism and was most attractive to lower caste groups, many of whom were descended from the pantheistic hunter-gatherers. As a result it has obvious environmental sensitivity and is increasingly presented as ideally suited to the promotion of environmental ethics (de Silva, 1991) but it also has divisions and contradictions. There is a tension between the value of life and human right to property, although it is resolved through the injunction to lead a sane and simple life. However, the later emphasis on the conduct of monks seemed to distance Buddhism from the practicalities of food production in favour of emphasising the mystical side of the religion. In effect it separated favoured individuals from the everyday realities of their society and made the majority into second class practitioners. This, and the adoption of the Buddha as the ninth incarnation of Vishnu may explain the withering of Buddhism in India.

The spread of Buddhism into China brought it under the influence of Taoism and Confucianism, hence re-emphasising the value of nature and the need for society to conform with natural law. This seems to have led it towards a more communal response rather than individual free will, but also to accept that even monks should work to produce food. The practical dominance of Confucianism has made pragmatism a stronger influence than religion in most of China's history and this mantle seems to have passed to Communism since 1947. The results have been reminiscent of Soviet struggles to dominate nature in the 1930s – inefficient collectivisation of agriculture plus highly polluting industrialisation and urbanisation. The one positive feature is that greater equality has mitigated the worst extremes of poverty.

The third shift of Buddhism, to Japan, involved another superimposition on to a pre-existing religion (Nakamura 1992). Shinto was another polytheistic village religion with a high regard for nature and a belief in the sacred character of natural features like mountains, forests and promontories. A particular feature was the link between the sun, the gods and people, since the imperial family were seen as divine and ancestors took their place as gods. In this context, Zen encouraged people to live naturally – including working to the best of their ability – in harmony with nature and the place in which they lived. It also encouraged the Japanese love of miniaturised forms which distil nature in a single plant or stone. To Western eyes this seems a conformist religious prescription, but it is one which was founded in reverence for nature.

The problem, as in India, came from adoption of Western style industrialisation and economics. Although not imposed by imperialism, at least until 1945, Senda (1992) describes the adoption of western ideas by Japanese modernisers as uncritical and as displacing indigenous traditions. The outcome is the paradoxical position of Japan in relation to global environmental problems – at once vilified for its pollution in the 1950s and regarded as the main eco-predator

in the 1980s, especially in relation to tropical forests and marine mammals, and at the same time in the lead in energy efficiency and domestic environmental policy (Maull, 1992, Tsumi and Weidner, 1989). Once again, there is a conflict between a traditional value system which seems to encourage harmony with nature and an imported approach which sanctions exploitation and pollution. Even more starkly than Western NIMBYism, the Japanese amalgam of western and eastern ideas has led to different standards being used at home and abroad.

My tentative conclusion from this brief survey of Asian religious values is that Hinduism and Bhuddism have values which are consistent with environmentalism, but that those attitudes are strongest in stable local communities. They don't seem all that effective in a society pursuing economic growth and technological development, especially when the urgent needs of mass poverty create a single minded pursuit of growth. The need seems to be to encourage a more progressive form of environmentalism which would enhance living standards without damaging the environment – an Asian form of sustainable development – or a move to a more global view.

GLOBAL VALUES

At present it seems to me that there are two approaches which are genuinely global concepts relevant to environmental values. However, one treats values only implicitly and the other is more concerned with development than with environment. They are the Gaia hypothesis and sustainable development. I'll start with the latter.

As articulated by the World Commission on Environment and Development (1987), the concept of sustainable development has been very influential in moulding debates about environmental policy. It has certainly influenced political responses before, during and after Rio. I don't want to go too deeply into the pros and cons of the concept as that has been done elsewhere (e.g. Blowers, 1993). I just want to highlight what I take to be its crucial strengths and weaknesses. Its key contributions were (a) that it linked environment and development instead of opposing them; (b) that it included social criteria among its imperatives, notably the call for equity between countries; and (c) that in emphasising sustainability of resources for future generations it mobilised the values of stewardship, arguably the most acceptable of the western positions I outlined earlier. These positive features were the reasons for its wide acceptability in principle, but it has two problems which may have reduced its practical effects. First, in spite of huge amounts of detailed work, most people are unclear about what sustainable development means in practice, so may accept the label without really accepting its implications. Second, most of the goals are actually development goals with the environment valued mainly for use rather than in its own right. A third problem is more critical for the present argument: Sundaram

(1993) has suggested that sustainability is impossible to define except in its absence. This means it reduces to an injunction not to do irreversible damage to the environment but does nothing to decide on priorities within the sustainable options. In short it defines only a minimum criterion for environmentalism and leaves a need for other criteria to guide decisions within the sustainable options.

The other global concept, Gaia (Lovelock, 1979, 1988), has a long history, dating back at least to James Hutton's recognition that the earth was a highly integrated set of processes in which mountain building and erosion are essential to produce supplies of new soil to sustain plant life and hence animals and humankind. Today, most climatologists, geologists and biologists seem to accept that there are feedback mechanisms between physical and biological processes. Lovelock's distinctive contribution was to insist that these processes make up a super-organic 'being', to name it Gaia (the Greek earth goddess) and to suggest that it is self regulating. Many have criticised the rhetoric of Gaia, seeing the hypothesis as teleological, though Lovelock insists that there is no need for conscious purpose to act to keep the biosphere in a state suitable for life. His intention was to stimulate scientific research, but Gaia has been taken up by environmentalists as a world view which links science to spirituality. My reading of Lovelock's work suggests that some of the New-Age readings are wide of the mark and that Gaia is primarily a statement of a holistic view of the biosphere with more to say about its ability to eliminate mankind than about how environmental policy should be shaped – for example Lovelock shocks environmentalists by his unwillingness to regard nuclear hazard as apocalyptic. His criticisms of the three C's – cattle, cars and chainsaws – do hint at how planetary health can be achieved. My own conclusion about Gaia is that it is a world view which is largely consistent with science and which also excites reverence, even awe, for nature. It has the potential to inspire environmentalists to value nature for its own sake and not only as a resource base for society. The strength of Gaia does allow change, and begins to suggest what kinds of change are beneficial and what are harmful (Sarre and Smith, 1991).

CONCLUSION

After this survey of value positions relevant to the environment, we can now be somewhat clearer both about the need for and about the attributes of a desirable environmentalist value position. The *need* arises from advanced industrialisation and the globalisation of the economy. This links to the observation that as human societies have developed from small scale hunter-gatherers through agriculture to industrialisation, the knowledge base has changed as have the problems; and value systems have also changed. New kinds of society call for new kinds of value system. As regards the *attributes*, while trying to formulate my own ideas about the varying emphases of past environmental value positions,

I realised that I was groping towards a division of knowledge and that Kant had formulated what I needed two centuries ago. An effective environmental value system must perform in relation to 'pure reason', 'practical reason' and 'aesthetics'. It needs to be consistent with science, to generate ethical principles and practical policies and to inspire aesthetic responses – both for the quality of everyday life and the challenge of the sublime. However, none of the value systems I have surveyed seems to cover all three dimensions, let alone to do so at a global scale. With three or more dimensions to be considered, it is impossible to define an optimum outcome a priori, but it is possible to establish some priorities for action and identify directions in which we need to go.

The first priority must be avoiding irreversible damage to natural systems. Part of this is commonsense and local: conserving biodiversity and soils will benefit society as well as nature as it maintains short term productivity and long term adaptability. Part requires improved scientific understanding: for example defining the tolerable limits to ozone depletion and global warming. Paradoxically, the criterion of reversibility is tighter if our attention is on society than if it is on nature: in the long term Gaia can reverse very large scale change, but reversibility in a timescale to suit human society is much more limited. Guidance in making these decisions will come from scientific and practical understanding, the no detriment principles of stewardship and the prevention principle. The result will be the achievement of sustainability.

The second priority is to promote long term sustainability by overcoming the problems of affluence and poverty diagnosed by the Bruntland report. This involves ethical and political change in relation to inequality. Current levels of inequality are not only abhorrent to many religions and political philosophies, including Utilitarianism, but also contribute to one of the most serious long term problems – the growth of the human population. There appear to be two possible ways of restraining, let alone reversing runaway population growth: on the one hand growing prosperity, security and education for the world's poor or, on the other hand, increased disease, conflict and repression for the same people. From both social and environmental perspectives, the former appears preferable in the long run, though it could pose resource and pollution problems if the affluent are unwilling to restrain excessive consumption to allow the poor to catch up. The penalty for failure will be a world of endemic conflict and environmental degradation, but there could also be a penalty for the wrong kind of success: many years ago the concept of the 'servo-globe' was invented to indicate that environmental and social problems could be solved by a combination of advanced technology and authoritarian politics to create a world in which few people would relish life. This danger can be avoided by tackling sustainability and equity in ways which anticipate the third dimension.

The third priority is the most difficult, but if the first two are achieved there will be more time and resources available. This is to evolve ways of life which

give the aesthetic due weight, which also means reworking the boundary between society and nature. After all, past discussions of the aesthetic have not been content to consider the quality of life and environment in inhabited areas, but have emphasised the need for contact with, or awareness of, wilderness. Indeed, the indications are that as humans grow more affluent they become less concerned with subsistence and material consumption and more concerned with the quality of their living environment and access to beautiful or sublime environments for sport, recreation and travel. Fortunately, it is not for us to define some future utopia, merely to avoid the mistakes which make it impossible for future generations to reach it. However, the dream of our ideal future and the nightmare of the Malthusian alternative may help to inspire people to make the short term sacrifices which are needed.

Many of the pracical steps which need to be taken have been defined in the Bruntland debate and at Rio, but so far we lack global commitment. In a postmodern society, the rhetoric of utopia and dystopia may help to change values. But achieving a global response cannot be just top down: it requires a strategy similar to that of Hinduism in the past – absorbing and reorienting the values of different groups rather than eliminating or converting them. However, the pressing need is to make the values of international politicians and businesses more environment sensitive. In my view, nothwithstanding Beck (1992) that is a task which can only be done by political application of science. The effectiveness of global warming and ozone depletion in mobilising politicians could be developed into a more holistic view of the global ecosystem, perhaps based on Gaia, and demanding the maintenance of key global systems. A more difficult proposition will be to make those global decisionmakers and western consumers take the environment and development needs of different localities seriously: that seems to contradict most of past experience about political or economic colonialism. Perhaps the key is to emphasise the global need to bring population growth under control and the shared responsibility for doing so. The empowerment of the less developed world requires fairer terms of trade and could be speeded by carbon taxes or tradeable permits and by a right to local assent to activities which may damage the environment, and hence to full compensation for any detriment. A more positive view is to stress economic development aimed at environmental improvement rather than production of consumer goods in spite of environmental damage.

NOTE

[1] Revised version of a paper first presented at the Fifth Indo-British Geographical Seminar held at the Lal Bahadur Shastri National Academy of Administration, Mussoorie, India, in April 1993.

REFERENCES

Balasubramian, R. 1991. 'The Hindu attitude to knowledge and nature', in Ravindra, R. (ed.) *Science and Spirit,* pp. 53-81. New York: Paragon House.

Blowers, A. 1993. Sustainable development: the challenge to the nation states. Paper to the fifth Indo British Geographical Seminar, Mussoorie, India, April 6-9.

Brennan, A. 1992. 'Moral pluralism and the environment', *Environmental Values* **1**: 15-33.

Brown, S. 1990. 'Humans and their environment: changing attitudes', in Sarre, P. and Silvertown, J. (eds.) *Environment and Society,* pp.238-269. London: Hodder and Stoughton.

Beck, U. 1992. 'From industrial society to the risk society: questions of survival, social structure and ecological enlightenment', *Theory, Culture and Society* **9**: 97-123.

Bookchin, M. 1982. *The Ecology of Freedom*. Palo Alto: Cheshire Books.

de Silva, P. 1991. 'Environmentalist ethics: a Buddhist perspective', in Fu, C.W. and Wawrytko, S.A. (eds.) *Buddhist Ethics in Modern Society,* pp. 173-84. New York: Greenwood.

Eagleton, T. 1990. *The Ideology of the Aesthetic.* Oxford: Blackwell.

Gadgil, M. and Guha, R. 1992. *This Fissured Land: An Ecological History of India*. Delhi: Oxford University Press.

Glacken, C.J. 1967. *Traces on the Rhodian Shore*. Berkeley and Los Angeles: University of California Press.

Glacken, C.J. 1992. 'Reflections on the history of western attitudes towards nature', *Geojournal* **26**(2): 103-11.

Gold,M. 1984. 'A history of nature', in D.Massey and J.Allen, *Geography Matters,* pp 12-33. Cambridge: Cambridge University Press.

Jamison, A. et al. 1990. *The Making of the New Environmental Consciousness: A Comparative Study of the Environmental Movements in Sweden, Denmark and the Netherlands*. Edinburgh: Edinburgh University Press.

Lovelock, J. 1979. *Gaia: A New Look at Life on Earth*. Oxford: Oxford University Press.

Lovelock, J. 1988. *The Ages of Gaia: A Biography of Our Living Earth.*

Maull, H.W. 1992. 'Japan's global environmental policies', in Hurrell, A. and Kingsbury, B. (eds.) *The International Politics of the Environment,* pp.354-372. Oxford: Clarendon Press.

Naess, A. 1973. 'The shallow and the deep: long range ecology movement. A summary', *Inquiry* **16**: 95-100.

Nakamura, H. 1992. 'The idea of nature in the East in comparison with the West', *Geojournal* **26**(2): 113-28.

Nash, R.F. 1982. *Wilderness and the American Mind.* New Haven: Yale University Press.

Nash, R.F. 1990. *American Environmentalism: Readings in Conservation History* (third edition). New York: McGraw Hill.

Pandeya, R.C. 1992. 'Indian attitude towards nature', *Geojournal* **26**(2): 135-8.

Passmore, J. 1978. *Man's Responsibility for Nature: Ecological Problems and Western Traditions*. London: Duckworth.

Pearce, D. et al. 1989. *Blueprint for a Green Economy*. London: Earthscan.

Pepper, D. 1984. *The Roots of Modern Environmentalism*. London: Croom Helm.

Ravindra, R. and Murray, P. 1991. in Ravindra, R. (ed.) *Science and Spirit.* New York: Paragon House.

Redclift,M. 1987. 'The production of nature and the reproduction of the species', *Antipode* **19**(2): 222-30.

Sarre, P. and Smith, P. 1991. *One World for One Earth*. London: Earthscan.

Schmidt, A. 1971. *The concept of nature in Marx*. London: New Left Books.

Senda, M. 1992. 'Japan's traditional view of nature and interpretation of landscape', *Geoforum* **26**(4): 129-34.

Singh, R.P.B. 1992. 'Nature and cosmic integrity: a search in Hindu geographical thought', *Geojournal* **26**(2): 139-47.

Smith, P. 1991. 'Global development issues', in Smith, P. and Warr. K. (eds.) *Global Environmental Problems*, pp. 203-242. London: Hodder and Stoughton.

Sundaram, KV 1993. The emerging new development paradigm: issues, considerations and research agenda. Indo-British geographical seminar, Mussoorie, India, April 6-9.

Tokar, B. 1988. 'Exploring the new ecologies: social ecology, deep ecology and the future of green political thought', *Alternatives* **15**(4): 31-43.

Tsumi, S. and Weidner, M. (eds.) 1989. *Environmental Policy in Japan*. Berlin: Edition Sigma.

Tuan, Yi-Fu 1974. *Topophilia: A Study of Environmental Perception, Attitudes and Values*. Englewood Cliffs, NJ: Prentice Hall.

World Commission on Environment and Development 1987. *Our Common Future*. Oxford: Oxford University Press.