10

Environment and society: shaping the future

Andrew Blowers and Pieter Leroy

10.1 A transforming moment?

As we approach the end of the millennium we may be experiencing a transforming moment in the relationship between society and the environment. Awareness of an impending environmental crisis has been gathering for the last three decades. Evidence of environmental deterioration has been uncovered by scientists, analysed in expert publications and publicised in the media; it has also stimulated the growth of environmental movements lobbying for environmental conservation. We have become familiar with such problems as depletion of the stratospheric ozone layer, the enhanced greenhouse effect, acid rain, the destruction of species and habitats, deforestation, desertification and resource depletion. From time to time the destructive power and environmental impact of modern technology are brought home by individual events such as the *Exxon Valdez* oil spill off Alaska in 1989, the explosion of the pesticide plant at Bhopal in 1984 and, most defining of all, the Chernobyl disaster of 1986.

Growing awareness of environmental problems has been paralleled by increasing political and governmental activity at all levels to confront them. There have been major assessments of the scale of problems and potential solutions. Among them have been *The Limits to Growth* (Meadows *et al.*, 1972) and *Beyond the Limits* by substantially the same authors two decades later (Meadows *et al.*, 1992); analyses of specific issues such as the problem of pesticides in *Silent Spring* (Carson, 1965); as well as reports drawn up by global commissions, of which the Brundtland Report, *Our Common Future* (WCED, 1987), which focuses on the concept of 'sustainable development', is by far the most influential. Sustainable development has become a *leitmotiv* of environmental policy at the national level (for example, the Dutch National Environmental Policy Plan (NEPP, 1989, summarised in Weale, 1992) or the UK environmental White Paper *This Common Inheritance* (HMSO, 1990) and at the international level (the European Commission's Fifth Environment Action Programme,

Towards Sustainability, 1992). The global interest reached an apotheosis in the panoply of reports, principles, conventions, programmes and policies generated by the UNCED Earth Summit at Rio in 1992 and it has continued through implementation plans and the Agenda 21 process. A point has been reached where sustainable development has become, at once, a goal, a strategy and a policy. Yet, for all its potency as a watchword, it remains an elusive, even enigmatic notion combining a scientific principle ('natural' standards and goals for sustainability), a moral guideline (an appeal to bring human behaviour within these 'natural' limits), a political goal (a starting point and final aim of a whole series of policy reports and measures) and a social practice (social development and change towards a more environmentally sound society).

There have been myriad attempts to define sustainable development. The concept is fully discussed in Blowers and Glasbergen (1995) of this series and the same ground will not be covered here. However, for the purposes of the following analysis, it is appropriate to provide a definition. This is taken from a Report of the Town and Country Planning Association of the UK and is essentially an elaboration of the Brundtland definition. Sustainable development is 'development that enhances the natural and built environment in ways that are compatible with:

- the requirement to conserve the stock of natural assets, wherever possible offsetting any unavoidable reduction by a compensating increase so that the total is left undiminished
- the need to avoid damaging the regenerative capacity of the world's natural ecosystems
- the need to achieve greater social equality
- the avoidance of the imposition of added costs or risks on succeeding generations (Blowers, ed., 1993).

This is, of course, a contentious definition. In its emphasis on human needs it reflects an anthropocentric perspective and its implicit recognition that natural assets may be diminished or substituted signals the optimising criteria of the more pragmatic approach often designated 'weak sustainability'. It represents a more practical approach than strong sustainability with its ecocentric view and uncompromising and unrealistic stance on maintaining the resource base intact.

Some critics consider the debate to be too indulgent. Beckerman, for example, argues that 'too much time and effort is [...] being devoted to developing the implications of the sustainable development concept' (1994, p.206). But, the concept of sustainable development goes far beyond such economic criteria as welfare, optimality, substitutability and thus refers to more than the scientific elaboration and economic quantification of the concept. It embraces a broader moral, social and political domain. The above definition and approaches contained in it recognise the importance of greater social equality as both a social condition and an ethical basis for sustainability.

The introduction of these moral and social aspects of the concept of sustainability places environmental politics and policy making in a much broader ecopolitical context. The so-called environmental crisis can be seen as a (possible) starting point for a fundamental change of view which challenges most of the contemporary

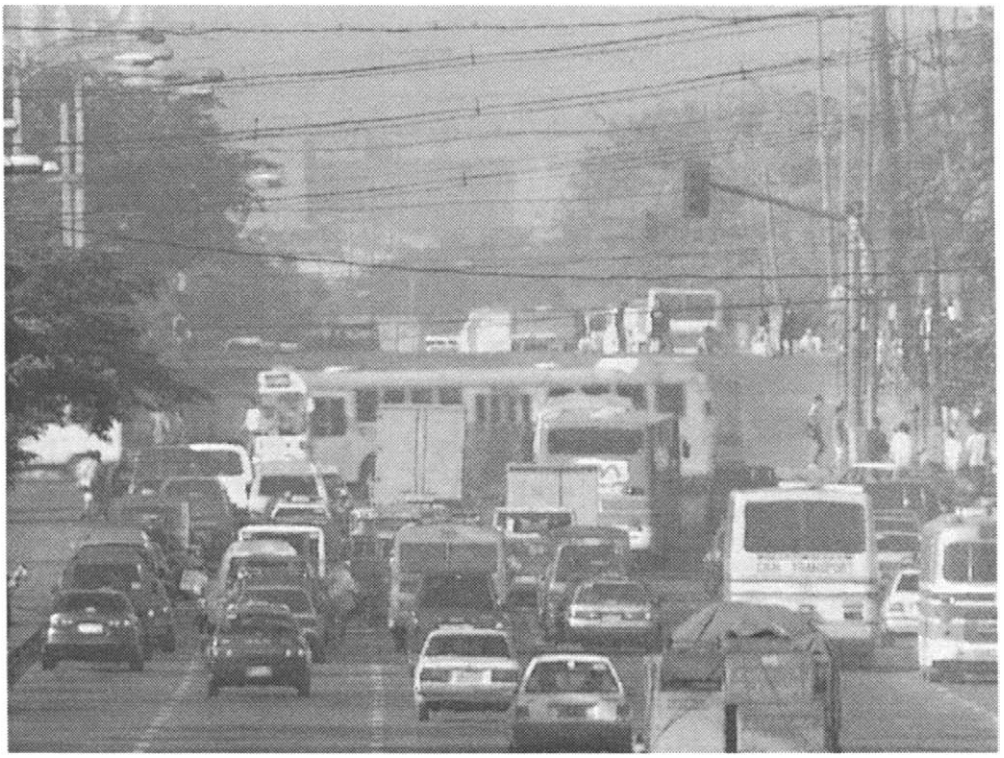

Plate 10.1 Traffic jams in Manila illustrate the growing problem of pollution in rapidly developing countries. Photo: Open University, BBC programming

assumptions (in the industrialised West) about growth, capitalism and lifestyle, associated with what sociologists call 'modern' society. As ecopolitical thought has developed so has a new ethic emerged, characterised, according to Eckersley, by its 'emphasis on cultural renewal, the emphasis on developing an ecological consciousness and the critique of industrialism' (1992, p.27). Berger *et al.*, back in 1973, characterised the ecological rhetoric, ideology and programmes of the early environmental movement as a typical part of the 'de-modernising consciousness'. By using the word 'de-modernising' they aimed to make clear that the protests of the new social movements were not against modernisation as such (and therefore, not 'anti-modernist'). They were against the specific 'external effects' of the processes of technological and economic modernisation on the one hand and the relative lack of modernisation in the political and social areas on the other. Environmental damage was one of these external effects, along with, inter alia, the tendency towards big scale technologies and the dependence upon technocratic expertise, autocratic styles of decision making and exploitation of the Third World. Therefore, Berger *et al.* suspected this de-modernising consciousness to be a basic feature of different so-called 'new' social movements (from the civil rights via students and women's to environmental and Third World movements), protesting against basic mechanisms of modern industrial society. Their

protests call for a fundamental change, for a fundamental shift in values. Since the early 1970s, the motivation for such change is even more imperative as the environmental consequences of modern industrial society become more apparent. This leads, in short, to the prospect of change, embracing sustainable development not only as a scientific concept, but in its fullest social, moral and political sense.

In this chapter we shall examine the prospects for significant social change related to and motivated by environmental change. We shall emphasise the *opportunities* for social change, but also the *constraints* which combine to resist or prevent it. Our argument proceeds as follows. It is possible to perceive the opportunity for social change especially as established patterns of industrialisation, employment, class and social organisation are disturbed and fragment. But we also have to pay attention to the constraints. These constraints are, first, encountered in the individual person and entrenched in the attitudes of the general public *vis-à-vis* the environment. People have been seduced by the values of consumer society such as growth, individualism, competition and self-interest which have become ascendant through the 1980s and 1990s in Western societies. A second constraint is an institutional one, namely that attitudes cannot be regarded separately, rooted as they are in political, economic and social institutions which were not designed or developed to implement sustainability goals. Such institutions (e.g. the organisations for energy production and supply, for drinking water supply, for waste disposal, etc.) aim to produce, sell and turn over more and more energy, resources and money. Sustainable development thus needs dramatic institutional change. Any attempt for such change, however, will have to deal with a third constraint, which is inherent in the authority of the nation state, the political and economic competition between national states and the relative weakness of recently developing international regimes. These constraints at the individual, institutional and the state level are closely interrelated. It is clear that change is needed at all these levels.

However speculative it might be, it is possible to argue that we may now have reached the point where environmental imperatives coincide with conditions of both individual, social and institutional uncertainty that can nurture social and political movements able to encourage policy change in the direction of sustainable development. These changes would be accompanied by a shift from a modern to a postmodern society, an industrial to a postindustrial economy and individualistic to communitarian values, which would involve a social willingness to tackle inequalities and a political system more concerned with long-term developments on a global level.

The argument is fairly abstract, although it will be supported by examples from time to time. The discussion is derived largely from observation of Western societies and we are conscious that it will often be inapplicable to developing countries. At times, also, the argument will be based on untested assumptions and even assertions. It is, therefore, provisional, speculative and tentative but it does attempt to look forward, to foresee a future society, different from the present, in which social and environmental change are compatible rather than in conflict. But, the analysis also examines the constraints (some might say the realities) that may prevent change. The argument must be viewed as an examination of possibilities, not as a forecast of the future.

We shall begin by examining the main characteristics of contemporary environmental problems (section 10.2), followed by an overview of some characteristics of contemporary society, starting from the concept of the 'risk society' (section 10.3).

This will demonstrate that the uncertainty of environmental risks is paralleled by increasing uncertainty and insecurity among individuals in (mainly Western) society. The interaction of environmental and social risks may pave the way for a shift in social values and for the emergence of new solidarities. The possibility of such a shift in values towards sustainable development and the political potential for achieving the necessary change are tackled in the next two sections. Section 10.4 examines the social conditions for change by drawing lessons from local environmental conflicts. Section 10.5 discusses the political conditions for change by analysing the actual influence of the environmental movement in precipitating both shifts in values and political changes. Although there is some evidence for a probable change, major political constraints are blocking the path to sustainable development, as we will discuss in the concluding section.

This conclusion and the chapter as a whole inevitably leave the question of what direction change is likely to take unanswered. It is in the speculative nature of a chapter that attempts to look into the future that questions are raised, but not answered. The argument is structured around some key questions on the relationship between environment and society, questions we hope will remain in the mind long after the book has been read.

10.2 Some characteristics of contemporary environmental problems

The key question for this section is: What are international environmental problems and what characteristics do they have in common? From the analysis provided throughout this book and its companion volumes it is possible to make some general statements about the distinctive nature of contemporary environmental problems and in particular about the relationship between environment and society.

First of all, except for some natural events, environmental problems are *anthropogenic in origin*, which means that they are created by human intervention in natural systems. Volcanoes, earthquakes and some climatic events are 'natural' events, which become social problems or disasters when they impact on human societies. But some events, apparently 'natural' at first sight, are seen to be anthropogenic on closer examination (e.g. floods caused by deforestation). However, the causal mechanisms of some environmental problems are not yet clear and this uncertainty calls for for the application of the precautionary principle. In short, environmental problems, generally speaking, are anthropogenic: some, such as deforestation and soil erosion, are centuries old but they and others are also the product of modern society, an outcome of the processes of industrialisation, agricultural development, economic growth and technological development.

Secondly, contemporary environmental problems are *global in reach*. It is, of course, true that in the past some natural disasters such as floods, famine and plague were widespread, sometimes threatening large areas of continental proportions. But in the late 20th century some environmental problems have become truly global. With Turner *et al.* (1990), we can distinguish between two types of globalisation of

environmental problems. The first kind of globalisation is anthropogenic and has to do with the 'diffusion of sources', for example, the transfer and diffusion of modern agricultural techniques, the spread of polluting industries and transport technologies to developing countries, the export of hazardous substances or the proliferation of nuclear weapons all over the world. The second type of globalisation is 'natural' and involves the 'diffusion of impacts'. It is 'natural', for these processes of globalisation are caused by natural media such as water, air and the atmosphere. Examples include global warming, ozone layer depletion, acid rain and radioactive fallout, which are problems which spread all over the world irrespective of their actual sources.

This leads on to the third characteristic of contemporary environmental problems which is their *unevenness of impact.* The globalisation of environmental problems, by one mechanism or another, implies that their impacts and costs are transferred, both socially and spatially. This in turn implies that those within our society and those nations of the world which are less able than others to protest successfully tend to bear a greater part of the environmental burden. Two questions follow from this: who is responsible for environmental problems and who are the victims? In the case of environmental problems caused by the 'diffusion of sources', co-operation, collaboration or corruption are involved and the benefits and impacts will be unevenly distributed. In the case of the 'diffusion of impacts', they are universal and unavoidable and many areas will bear the impacts without benefiting from the industrial and economic growth which caused them. Moreover, the latter kind of environmental

Plate 10.2 The human consequences of natural disasters – Mt. Pinatubo, Philippines – shows how environmental risks are a familiar feature in developing societies. Photo: Andrew Blowers

problem tends to be irreversible, thereby having an impact on future generations. Inequalities are likely to persist in so far as impacts will be uneven and wealthy countries can take preventative action (e.g. by building flood defences). Ultimately, of course, no one can escape.

This introduces a fourth characteristic, the fact that global environmental problems are *constituted in terms of survival.* Although health, amenity and resource depletion are also issues of concern (Goodin, 1976), survival of the natural processes which support human and other forms of life has become the key issue. The destruction of forests, loss of biodiversity, climate change, ozone depletion and desertification are now viewed in terms of the survival of human beings and other species.

A fifth characteristic is *the dependence upon experts and expert systems*, both for the identification of environmental problems and for the means of solution. The role of scientists has been crucial in identifying such problems as the enhanced greenhouse effect or ozone depletion, problems which are invisible but incremental and cumulative and thus of high consequence. But scientific expertise is not unequivocal; there are many uncertainties, models are imperfect, theories controversial, evidence incomplete and forecasts speculative. As Boehmer-Christiansen and Skea (1991) and Boehmer-Christiansen (1994) make clear, science not only retains enormous influence in revealing problems, but also plays a major role in the processes of agenda setting and decision making on environmental issues.

Conflict of interests is a sixth characteristic which becomes prominent in the setting of the international environmental agenda. The scientific community is but one such interest, which depends upon many other, obviously conflicting interests. Business corporations, especially multinationally organised banks, holdings and firms, involved in natural resources, agriculture and food, energy production, transport and basic industrial products all play a major role in constructing the issues for attention. Their interests are often in conflict with each other and also with the interests of competing nation states who may also be in conflict with supranational or even (sub)continental economic regimes such as the EU, NAFTA, etc. Moreover, international organisations such as the World Bank or the International Monetary Fund also play their role in international agenda setting and decision making. Against the overwhelming strength of these economic and political powers, the influence of the international environmental movement seems rather limited (see Box 1).

A seventh characteristic is *the ethical dimension* of environmental problems which arises as the logical outcome of the characteristics enumerated above. In general, environmental problems have stimulated a major debate about the relationship between society and its environment; more specifically, the debate centres on people's responsibility for the environment in a context of scientific knowledge and uncertainty and of short-term advantages and long-term risk. This debate extends into consideration of a range of issues such as the rights of individuals and the nature of participation in decision making, the rights of future generations, the problem of social inequality and so on. As we have seen, this debate is to an extent encapsulated in the concept and goal of sustainable development which links together the natural and the social, science and moral values, principles and policies.

These seven characteristics help to define the nature of contemporary global environmental problems. We turn now to our analysis of the main characteristics of

Conflicting interests over international environmental issues

At the Rio Earth Summit, the conflicts between the rich and poor became evident. The Northern countries, which felt vulnerable to global environmental problems such as climate change and biodiversity loss, attempted to extract commitments on environmental conservation from the South. However, the South, which felt more vulnerable to perceived underdevelopment, was concerned with extracting transfers from the North. For example, the South resisted demands from the North for a Global Forests Convention, arguing that the North should agree to large-scale financial and technology transfers to the South to compensate the latter if it was to agree to conserve its forests. It was also noticeable at the Earth Summit that environmental issues peculiar to the South did not receive high level attention from the North, although agreement was reached that a Convention to Combat Desertification should be negotiated. The negotiations for this convention were concluded in 1994.

contemporary society in order to understand the societal and political context of the environmental problems mentioned above.

10.3 Some characteristics of contemporary society

The question for this section is, 'What are the main characteristics of contemporary society and what are their implications for environmental problems?' Depending upon one's scientific point of view or upon one's scientific interest, contemporary society can be characterised in many different ways. The seriousness and globalisation of environmental problems, however, has led some authors to link up the typical characteristics of environmental problems with some basic features of contemporary society. One of these authors is the German sociologist Ulrich Beck (Beck, 1992; Beck *et al.*, 1994). He has introduced the term 'risk society' to describe contemporary uncertainty and insecurity at both the individual and social level. This uncertainty does not refer only to the globalisation of environmental problems but also to another important aspect, the changing nature of environmental problems, especially their threatening character and their possibly far-reaching impacts and consequences. These characteristics are combined in the concept of 'high consequence risks', characterised by a low probability of occurrence but having great impacts if they ever do occur. The concept of 'high consequence risks' has long been recognised in both nuclear and chemical industries and has given rise to a lot of rather theoretical discussion and exercises on risk analysis. The meaning of the concept became obvious to everyone with the 1986 Chernobyl accident.

Apart from these high consequence risks, Beck's concept of risk society refers to the fact that the significance of contemporary environmental problems can be put in a social context. Certain problems, such as global warming, nuclear proliferation, ozone depletion and species destruction, pose risks that are indiscriminate, unpredictable and, in some cases, unavoidable and irreversible. They are risks from which no one can escape but, since individual actions in themselves cannot affect the system, everyone can evade responsibility. Harm to the environment cannot be prevented since 'one can do something and continue doing it without having to take personal responsibility for it' (Beck, 1992, p.33). In the terminal case, a nuclear war, 'the effect only exists when it occurs and when it occurs, it no longer exists, because nothing exists any more' (p.38). Moreover, since the creation of risks, the identification of global environmental problems and the protection from risks are all in the realm of scientific expertise, people feel incapable of dealing with such problems and resigned to leaving them to the experts. The tendency to evade individual responsibility, to adopt a kind of fatalism, is confirmed.

We shall deal in more detail with the 'risk society' concept below. Here we should take note of the context in which the concept has been developed. Though useful in linking up contemporary environmental and societal problems as we shall see, we have to be aware of the typical Western and contemporary bias of the notion itself. Indeed,

Plate 10.3 A residential area in the middle of heavy industrial plants, Chorzów, Poland. Photo: Wim Oskam/Hollandse Hoogte

some of the features of 'risk society' are not particularly new, novel or even modern. In the distant past there have been risks such as plague and famine which also had continental reach. And even in our times, the concept of a risk society is, for many different reasons such as authoritarian political systems, poverty, war, etc., nothing new to an average citizen of Iran or Iraq, of some South Asian and Latin American countries, or for citizens in Ethiopia and Zaire, let alone Rwanda.

Beck does not deny the Western bias of the concept when he links it up with the typical kinds of both individual and social uncertainty Western citizens have to deal with. Individual uncertainty, in Beck's view, has to do, first, with 'individualisation' in Western societies. Individualisation is the outcome of two processes: (a) the emancipation of some sections of society such as women, workers, students and ethnic minorities from traditional, often somewhat authoritarian institutions (families, industries, universities, etc.) where they have been victimised or discriminated against; (b) the weakening of both traditional and modern patterns of societal integration. By 'traditional' we refer to patterns of integration based upon family, kinship, neighbourhood or religion, whereas 'modern' refers to the mechanisms of integration based upon profession or socio-economic status, such as trade unions or political parties. The fragmentation and sometimes even the breakdown of some integrative networks and structures from traditional and modern society is well documented empirically by reports on the waning influence of traditional communities and neighbourhood networks or on the weakening of loyalty to religion, trade unions and political parties.

Emancipation on the one hand and weakening integrative capacity on the other are of course mirror images of each other. Beck conceives the situation thus: people 'are *set free* from the *apparently naturally ordained* ways of life and certainties of industrial society ...' and: 'Traditional forms of coping with anxiety and insecurity in socio-moral milieus, families, marriage and male–female roles are failing. To the same degree, coping with anxiety and insecurity is demanded of individuals themselves' (Beck, 1992, p.153). Individualisation and its underlying processes of emancipation and weakening integrative capacity have both created and reinforced the uncertainty for the personal life of the individual. Basic decisions, such as those involving education, relationships, marriage, ideology and career, which were formerly more or less automatically decided by group culture, institutional tradition and social context, now call for a 'personal decision', corresponding to a highly personal 'lifestyle'. This greater personal responsibility and insecurity are evident from, among other things, tension over the role and the relationship between the sexes, the tendency towards higher divorce, lower fertility, the lack of job security and the risk of poverty, loneliness or isolation. In short, individualisation requires the individual to be responsible for his or her destiny and therefore leads individuals to believe that 'everything revolves around the axis of one's personal ego and personal life' (Beck, 1992, p.135).

These processes of individualisation have been set in train by such things as the emergence and spread of modern techniques for transport and travelling and by electronic communication. Along with creating more chances for emancipation, these techniques have been weakening the former, locality-based patterns of social interaction and integration. But the personal uncertainty resulting from the (social) processes

of individualisation has been increased by changing economic circumstances. Not only has economic growth been lower than in the 1960s, thereby making a whole generation uncertain about their economic future. Their professional future has been endangered also by reorganisation of the industrial sector; by processes of deindustrialisation and automisation of the economy; by economic liberalisation and the ideology of the market which have penetrated into areas such as health, education, welfare and transport and changed functions formerly performed by the state on a universal basis; and by deregulation and privatisation of important parts of the public sector which were considered formerly as relatively safe for a career. The combination of these processes has led to greater unemployment and to an increasing dependence upon welfare payments, which have themselves been reduced by governments forced to cut public expenditure in order to be able to cut taxes in the hope of stimulating the economy again. Indeed, although economic growth has increased over the last years, it has become clear that employment has not grown likewise. Therefore, these technological, organisational and economic changes seem to make flexibility the only sustaining quality required on the labour market.

The implications of this analysis for environmental politics and policy making are complex. On the one hand, the fatalism induced by the scale, uncertainty and elusiveness of environmental risk combined with the insecurity experienced at the individual level suggests a focus on the immediate, the short term and a tendency to ignore possible but distant future perils. And indeed, there is some evidence of greater emphasis, at both the individual and the social levels, on short-term interests, on immediate and local interests. In some cases, personal, social and economic uncertainty even leads to the emergence and success of social movements and political parties exploiting the feelings of insecurity by blaming minority groups, especially foreign workers, for it. In any case, the processes of individualisation have weakened the basis for organised 'classical' solidarity and may seem to make the emergence of new solidarity movements rather unlikely. Yet, on the political level, the emphasis of policy making in Western countries remains firmly on the economic sphere, with environmental protection as an important but secondary consideration in the face of economic imperatives of production, employment, profit and growth.

On the other hand, the urgency of the environmental problems combined with the fragmentation of classical social institutions has led to new forms of environmental action and solidarity. Action groups in different countries have been protesting successfully against various kinds of environmental threat, thereby sometimes expressing and organising solidarity with overseas regions and countries. Furthermore, the communication techniques introduced recently enable NGOs to communicate, exchange expertise and organise lobbying all over the world. Greenpeace which is based upon a small group of highly motivated 'professional militants', supported morally and financially by an almost global audience, is one of the best known examples of such a postmodern social movement.

These examples give rise to such questions as, 'What are the actual social conditions for a social change towards sustainable development' and 'What political circumstances do we need for environmental management and planning to become central activities in contemporary society'? We shall look at each of these in turn in the subsequent sections of this chapter.

10.4 The social conditions for environmental change

Environmental problems, whether at local, national or international level, arouse social conflicts which engage a variety of interests. Examples have been provided throughout this Environmental Policy series of books, but especially in Sloep and Blowers (1996). The key question in this section is: What are the typical features of the social conflicts surrounding environmental problems, the definition of these conflicts and their potential solution? Paradoxically, we shall start by focusing on local conflicts, intending though to draw out some of the implications for problems at the international level also.

Environmental quality and social (in)equality: the processes of peripheralisation

Environmental problems, as a result of their globalisation, need not be characterised as 'indiscriminate' as Beck does. It is true that the globalisation of the economy causes the transfer of the sources of environmental damage from the richer, Northern countries to the South and politics and technology make possible the transfer of some environmental impacts. But the question arises as to who is responsible for the sources and the impacts and who is suffering from them? In our view, environmental problems and their impacts are still to be characterised by their unevenness. Hence, the association between social inequality and environmental inequality: they are mutually reinforcing processes. Conflicts between rich and poor are resolved by the rich, exercising power in order to sustain their interest in a clean environment, whereas the poor become spatially segregated in areas of greater environmental degradation. While the demarcation is nowhere and never precise or complete, the general tendency towards spatial/social segregation may be observed historically. During the 19th century fear of cholera and other epidemics stimulated both the movement of the rich to the suburbs and the development of clean water supplies and sewerage systems spreading from the rich districts eventually to the poor (De Swaan, 1988). During the 20th century, the wealthy have often managed to defend their territory against public access on grounds of amenity and environmental conservation. And the fear of environmental risks to health, amenity or survival has provided the basis for social conflicts over the siting of a whole range of polluting industries or facilities, sometimes known as Locally Unwanted Land Uses (LULUs). Among these are chemical plants, toxic waste incinerators, radioactive waste repositories, nuclear power stations and transportation infrastructures, such as roads, railways and airports.

These social conflicts over the location of locally unwanted facilities more often than not result in the polluting activities ending up in already environmentally degraded or economically depressed areas. These areas are sometimes called 'pollution havens' or specifically 'nuclear oases' (Blowers *et al.*, 1991) or 'national sacrifice areas' (Davis, 1993). They may also be defined as 'peripheral communities' which share certain specific characteristics (Blowers and Leroy, 1994). These are, first, remoteness defined as either physical distance or relative inaccessibility from metropolitan centres.

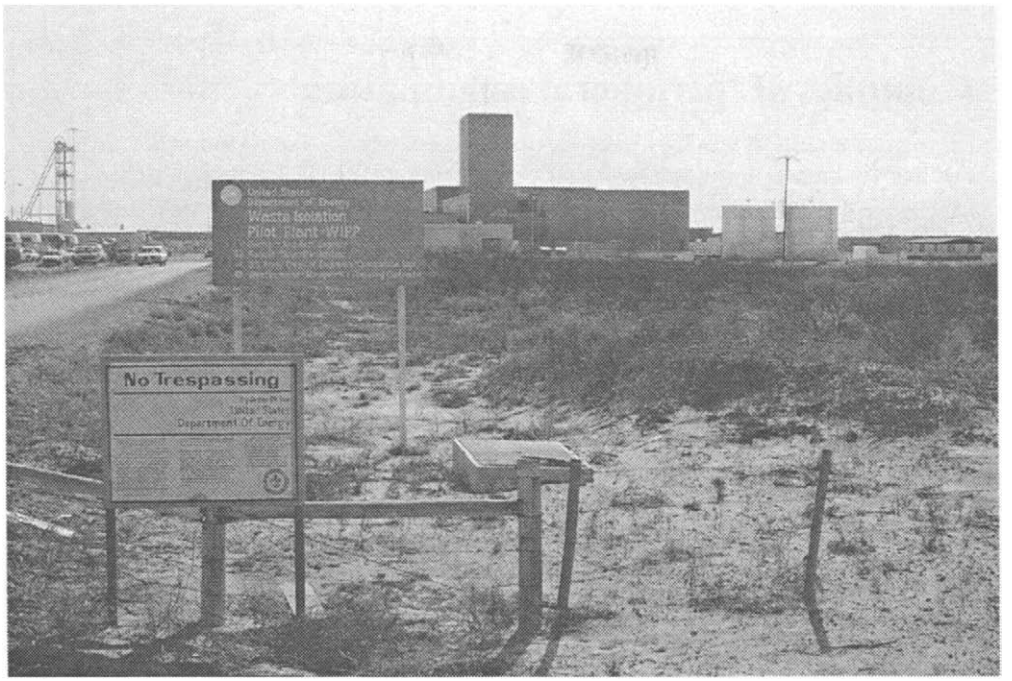

Plate 10.4 The Waste Isolation Pilot Plant near Carlsbad, New Mexico, a nuclear repository in a remote area of the United States. Photo: Andrew Blowers

Second, such communities tend to be economically on the margins, either dominated by one industry (often with its headquarters elsewhere) or victims of industrial decline and high unemployment. A third characteristic is their relative powerlessness, their inability to mobilise socially and politically against decisions taken elsewhere. This is reinforced by a fourth characteristic, a culture in which acceptance, cynicism and defensiveness against external influence are mixed, thereby reinforcing the situation of isolation and powerlessness. The fifth characteristic is both cause and effect, it is the condition of environmental degradation associated with polluting and risk-creating activities (see Box 2).

These peripheral communities are, in a sense, the victims of a process, a process of 'peripheralisation'. Unwanted activities gravitate towards them because of the condition of powerlessness, acceptance and marginality – it is in their economic interest to gain the employment and wealth that is offered. By contrast, other areas are able to resist such activities by exercising their power and influence. These communities stand in contrast to peripheral areas in terms of their greater accessibility, their social and economic variety and the ability to mobilise effectively against external threats. The process of peripheralisation, therefore, is one of push and pull, a mutually reinforcing process reflecting inequalities in wealth and power between communities.

Conflicts over the allocation of LULUs reveal some fascinating social features. Alliances and coalitions are mobilised which cut right across the conventional social and political divides of modern society. Peripheral communities often manifest

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Examples of 'peripheral communities'

Large-scale industrial activities, involving pollution and risk, tend to be found in locations that are 'peripheral' in a geographical, social or economic sense. Geographical remoteness is particularly characteristic of the nuclear industry, especially of those activities connected with nuclear weapons, reprocessing or waste management. In the United States, as the nuclear military complex developed vast reservations were created at Hanford in the semidesert of Washington state in the Pacific North West, in Idaho, in the Texas Panhandle and at the Savannah River plant in South Carolina. A nuclear waste repository for military wastes has been developed in the Chihuahua Desert of South Eastern New Mexico (Plate 10.4), the state where the first atomic bomb was exploded, and a repository for high level wastes from the civil nuclear programme is proposed at Yucca Mountain in the desert of Nevada about 100 miles North of Las Vegas.

In writing about Hanford, Paul Loeb described its society as a 'nuclear culture', a combination of isolation, acceptance and defensiveness about a complex responsible for the production of nuclear weapons. Geographically, he encountered 'a model for the "nuclear parks" which, by concentrating all atomic operations in a few scattered sites, distanced them geographically from any opposition. The Area, as it is called by most employees, included 570 fenced and guarded square miles through which 13,000 workers travelled daily to their jobs ...' (Loeb, 1986, p.28).

Even in the smaller, more densely populated countries, nuclear facilities are found in relatively remote locations. In the UK, Sellafield on the coast of West Cumbria and Dounreay on the Northern tip of the Scottish mainland are the locations for reprocessing and nuclear waste projects. Wynne *et al.* encountered in West Cumbria 'a widely expressed feeling of being a subservient and somewhat marginal population' (Zonabend, 1993, p.38) that led to a sense of stigma, dependency and disempowerment. In France, the major reprocessing complex is located at the tip of the Cotentin peninsula in Normandy, an area described as follows by Françoise Zonabend:

> Cut off, windswept, ringed by powerful ocean currents, unfit for any kind of economic development in terms of farming or fishing, doomed to depopulation – that was how geographers and historians used to describe La Hague up until the beginning of the 1960s. The selfsame reasons, however, made this the ideal site for an industrial complex, dedicated to the reprocessing and stockpiling of spent nuclear fuel (1993, p.15).

In Germany, too, the location for spent fuel storage and a potential waste repository is in a relatively isolated rural area, at Gorleben in the Wendland, in Lower Saxony. Until reunification it was on the border of the country bounded on three sides by East Germany.

In other industries locations may be characterised by social and economic peripherality rather than geographical isolation. For example, in Belgium, Tessenderlo, the centre of a polluting and hazardous petrochemicals complex, though not far from Liège and Antwerp, is in an area of economic stagnation heavily dependent on one economic sector. Whether they are geographically remote or not, all peripheral communities experience some degree of isolation.

alliances between workers and management, linked together in mutual defence. In communities resisting LULUs successfully, local elites combine with groups right across the political and class spectrum in a united front to defend their territory against external threat. Occasionally, where more than one community is earmarked for a possible LULU, a coalition of threatened communities may develop. Often these communities will be joined by environmental activists who perceive that a local conflict will enhance their broader objectives.

These conflicts over the (al)location of LULUs are not merely evidence of NIMBYism (Not In My Backyard) (Wolsink, 1992). Defence of territory is, indeed, a key objective of many participants who will not be much troubled if the activity ends up somewhere else. Other participants, marching to a different drum, may be against the activity altogether or arguing for further justification, review or delay while necessary research establishes the justification. Such conflicts are inherently complex expressing in a single cause a multitude of different objectives, values, interests and preferences. Environmental conflicts, especially over activities which pollute or degrade the environment, give rise to cross-cutting coalitions of interests united (at least temporarily) in defending their community. But, if successful, they also reinforce patterns of location which ensure the perpetuation of environmental inequalities.

Some qualifications need to be made about this thesis of peripheralisation. Firstly, conflicts of this kind are not inevitable. In some cases it is possible to achieve locations of LULUs through negotiation, a process which will often include some trade-offs in the form of improved facilities, modifications to the proposals, environmental enhancement, detailed emergency planning procedures and so on. Secondly, the coalitions of interest may be fragile and subject to internal conflicts. For example, opponents of a LULU may be divided over whether it is acceptable in modified form or not at all. Similarly supporters may be opposed by business interests elsewhere who see the proposal as a threat. For example, under privatisation a nuclear power station might be opposed by other suppliers of electricity, coal or oil. And, thirdly, attitudes to LULUs will vary over time. For instance, whereas 30 years ago there was virtually no opposition to the construction of nuclear plants, today resistance can be almost guaranteed. The likelihood and intensity of conflict also varies in response to the salience of the environment as an issue. Its importance varies over time as a result of a number of interlinked factors such as the level of prosperity (the environment has a higher priority in prosperous times), the aftermath of an environmental disaster (Chernobyl heightened fears and environmental consciousness) and in response to changing social values or cultural differences.

Global peripheralisation?

The analysis above is based on the observation of conflicts over LULUs in Western countries. Therefore it is partial and limited in a number of respects. It focuses on local problems and conflicts, particularly on the siting and (al)location aspects of these conflicts and their possible political solutions. As the scope is limited to issues of siting and locating, both broader diffused *sources*, such as agricultural or traffic pollution, and broader diffused *impacts*, such as air and water pollution, tend to be neglected.

Having said that, the thesis of peripheralisation intuitively seems to be applicable

also to some international environmental problems, conflicts and their solution. The transfer of both sources and impacts to developing countries may be seen as part of a comprehensive process of global peripheralisation. The transfer of sources includes hazardous products and industries to Third World countries highly dependent on them for their development, the export of hazardous waste to countries with a less developed system of environmental law and protection and the exploitation by Northern firms and countries of the natural resources in some Southern countries (examples of these are discussed in Sage, 1996 and Blowers, 1996). Though we should not push the analogy too far, the emergence of different kinds of protest movements in countries of the South, varying from traditional or religious via ethnic or nationalistic to very modern, can be regarded as a social and political reaction to the intrusion of this threatening Western technology. These coalitions, like the local ones, are fragile and often temporary, whereas others deviate from the original goals and purposes, ending up in a national or religious (contra)revolution. Nevertheless, these movements, sometimes supported by Western NGOs, basically try to overcome their countries' dependence upon Western economics and culture. Their success, like that of local coalitions anywhere, depends greatly upon their ability to mobilise enough social, political and economic support, thereby cutting across the ethnic, national, religious and political divides of their developing society. The support and power they are able to build up can change the international power balance and thereby explain the actual outcome of most negotiation processes on international environmental issues (the development of environmental movements and their impact in developing countries is discussed in Chapter 2 of this volume and in Potter, 1995).

Changing values

As we stated earlier, focusing on the environmental problems of LULUs may lead to some premature conclusions on the social conditions for environmental change. Whereas LULUs often provoke fierce reactions, that is not so for the vast majority of environmental problems. The impact on people's actual lives may be barely perceptible or it may be transferred either in time (to future generations) or in space (to other places). One of the typical features of LULUs is that the environmental risks they pose are very visible, specific and nearby, which enhances the possibilities for societal and political mobilisation and protest. Environmental problems related, for instance, to high levels of energy consumption and car use have more diffuse sources and impacts, which provide the excuse and opportunities to evade responsibility.

However, environmental conflicts over LULUs have a common characteristic that may be of general importance. Although related to specific issues and proposals, they manifest a clash between environmental and economic interests. In more general terms they represent a clash between value systems concerned with economic growth and material development on the one hand and values concerning the locality, the environment and (participation in) decision making on the other. Those holding vastly different interests and values can be brought together in a temporary coalition based upon apparently similar objectives. For instance, those opposing nuclear energy may link up with those who support it, combining forces to prevent a nuclear facility in a specific location.

During the course of the conflict these contrasting value systems become co-mingled, united in the common cause of defending the local environment and trying to influence decision makers. We can distinguish broadly two sets of values engaged in these coalitions: one more conservative, the other more radical. As both may nurture value systems which are more aligned to sustainable living, they may be important social conditions for an environmental change. Conservative values engage in environmental protest for they emphasise continuity and the status quo. These are defensive values, defending property, territory, amenity, heritage. They espouse policies of conservation and environmental protection. They do not challenge the existing economic or political system, but intend to work within it. In a more ethical perspective, they emphasise *stewardship*, the 'moral duty to look after our planet and to hand it on in good order to future generations' (HMSO, 1990, p.10). They may also take a utilitarian approach to the evaluation of the relationship between interests or between society and Nature. Basically, this is an anthropocentric position devoted to human needs, which requires the balancing of costs and benefits, advantages and disadvantages, pleasure and pain so that the positive qualities are maximised. Supporters of this conservative value system may be prepared to accept some minor changes for the sake of the environment, but they are not prepared to alter the basic structure of society or the dominating world-views and paradigms.

Radical value systems provide some obvious points of contrast. These perspectives recognise the interaction of human and natural systems; they seek to protect the global commons, biodiversity, the rights of future generations, animal rights and so on. They articulate the need for fundamental changes in economic and political systems. They campaign against such activities as the trade in hazardous wastes or the nuclear industry which they claim are the cause of environmental degradation. Instead they advocate *communitarian principles*, the need for sustainable lifestyles and policies enabling long-term environmental management. They have developed an ecocentric philosophy and have motivated the emergence of green politics and a range of environmentalist perspectives during the past three decades. In short, they advocate a so-called 'New Environmental Paradigm' (NEP), contrasting with the 'Human Exemptionalism Paradigm' (HEP) (see Box 3).

Radical approaches stand in sharp contrast to conservative values in that they are 'concerned to challenge and ultimately transform existing power relations, such as those based on class, gender, race and nationality, to ensure an equitable transition towards an ecologically sustainable society' (Eckersley, 1992, p.22). This is an idealistic approach compared to the more pragmatic, conservative position with its emphasis on established order and resistance to change. But at the level of both environmental action and policy making, there are interesting convergences between the different positions. 'The most significant of these are an emphasis on prudence or caution in innovation (especially with respect to technology), the desire to conserve existing things (old buildings, Nature reserves, endangered values) to maintain continuity with the past, the use of organic political metaphors and the rejection of totalitarianism' (*ibid.*, p.21). Hence, the *precautionary principle* is readily endorsed by conservatives and radicals alike. This was expressed in the Rio Declaration on Environment and Development as principle 15: 'Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation' (UN, 1993, p.10).

3

The identification of environmental perspectives

Since the emergence of environmental concerns in the early 1970s, many authors have tried to identify the basic ideas and features of the environmentalist world-view. Parallel to and elaborating the anthropocentric–ecocentric dichotomy, Catton and Dunlap (1978, 1980) distinguished between HEP and NEP.

The argument is as follows. Environmental problems are caused by the dominance of a world-view in which human beings are different from and superior to all other creatures, apparently giving them the right to exploit Nature for their own sake. In this clearly anthropocentric view, human society has unlimited opportunities to progress, as its technical skills are superior, enabling it to tackle every single problem. Nature and natural resources also give human beings unlimited possibilities. In short, these are the basic features of the predominant world-view, represented in the so-called 'Human Exemptionalism Paradigm'. It is important to stress that HEP is not just an isolated part of our world-view. This paradigm and the values corresponding with it are deeply rooted in our attitudes and behaviour, institutionalised in our societal organisation and our economy and organised into and legitimised by the concept of the nation state and its policies.

Social change for a more sustainable development implies a dramatic change in our world-view and thus in our basic thoughts and values, our attitudes, institutions and policies. Catton and Dunlap signalled the emergence of a new value system, the so-called 'New Ecological Paradigm' or NEP. From this perspective, human beings, though exceptional creatures, are perceived as highly involved in and dependent upon the rather autonomous laws and mechanisms of the (global) ecosystem. They cannot, therefore, afford to ignore these laws and mechanisms and will have to tailor their attitudes and behaviour to the limits and uncertainties these mechanisms set out. NEP clearly has moral implications, such as the need for human restraint *vis-à-vis* the environment. The precautionary principle is one of the moral and political outcomes of this radical environmental paradigm.

Despite their differences in world-view, ideologies and objectives, the conservative and the radical perspectives can motivate unified action, not only over specific environmental issues and in isolated conflicts, but also in formulating environmental policy principles. We should not be too optimistic here, for the links between a shift in values manifested during some local environmental conflicts and a major shift towards sustainable development are tenuous and partial. Nevertheless, as the notion of risk society makes clear, we can expect environmental problems to be more and more perceived as nearby and visible, having specific impacts on people's lives. Parallel to local environmental conflicts forging new, albeit temporary coalitions and revitalising traditional community solidarity, we can expect environmental threats at a more general level in a context of general uncertainty to increase the demand for new or revitalised forms of coalition. Thus a risk society may exert increasing influence in that it opens up some new forms of solidarity and has the potential for shifting values, two necessary social conditions for a possible political change. The potential for shifting values is the main subject of the next section.

10.5 The political conditions for environmental change

In the previous sections, we have tackled three key questions: the first on the nature of contemporary global environmental problems, the second on the characteristics of contemporary society and the third on some possible prospects for a social change. We now turn to a fourth question: What are the constraints and opportunities that influence environmental policy making in an international context? Here we focus on the political conditions favouring or preventing the social changes that are necessary. Those conditions are partly concerned with the opportunities a political system offers, for example, the degree of political openness and participation it allows; on the other hand they are also concerned with those political conditions concerning the strength and effectiveness of the countervailing powers which are challenging the political system to effect change.

Political openness and participation

The opportunities for political changes in a society depend upon the emergence of new political ideas and movements, but also on the openness of the political system itself. Typically in the local environmental conflicts mentioned above, local interests are pitted against government or major industries which possess economic and social resources, professional information and expertise and political power. These powerful economic interests are able to exercise their power in two ways. One is through the privileged access they enjoy to the decision-making centres. Business has routine representation on advisory committees and enjoys both institutionalised and informal access to political decision makers. The other way of deploying power has been called non-decision making (Bachrach and Baratz, 1970; Crenson, 1971). In other words, business does not have to assert its power because its needs are already assumed and understood by political decision makers. There is, therefore, a political culture in which the reciprocal needs of business and government are fully understood by each side. Business provides economic growth and resources and its ability to withdraw or transfer these elsewhere is implicitly acknowledged. As Lindblom, reflecting on the power of industry to influence environmental policies, has put it, 'Yet ordinarily as new conditions or problems arise – for example, public demands for restriction on air pollution – businessmen know that government officials will understand their wishes – in this case their unwillingness or incapacity to bear without help the costs of stopping industrial discharges into the air' (Lindblom, 1977, p.184). Decision making is relatively closed and secretive with limited participation by the general public.

By contrast, environmentalist interests rely for their influence and power on their ability to prise open the political process. They emphasise the need for openness in terms of information and decision making; they use the media to publicise their cause and they seek to influence decision makers through lobbying; they try to mobilise a wider public through campaigning, demonstrations and various forms of protest including, occasionally, direct action, thereby increasing again media attention and

political strength. Though the environmental movement applies pressure on decision makers at all levels, the level of local government (which needs to reflect local interests and which is responsible for the local environment) is particularly susceptible to the influence of local action groups.

Environmentalist groups appear to have achieved some successes. There are numerous examples of projects (e.g. road schemes, nuclear repositories, incinerators, housing developments) that have been withdrawn, deferred or revised, though in some cases it is doubtful whether withdrawal or postponing was caused by environmental action. Very often the cause is the government failing or being unwilling to find enough funds to finance projects such as new motorways, airports, etc. Once the pressure on cutting back public spending has diminished, formerly postponed projects reappear on the agenda. On the other hand, it is clear that environmental movements, by using a variety of strategies (mobilisation, consultation, lobbying, communication, organising counter-expertise, etc.) have influenced policy making in general and environmentally relevant plans in particular at a formative stage. In recent years their arguments have achieved greater credibility, since they frequently employ experts to challenge and counter the expertise of their opponents. In some cases environmental movements have succeeded in provoking new and often specific procedures for decision making – especially referenda, both at national and local level – thereby not only increasing, albeit temporarily, the openness of the political system but also, to some extent, altering the balance of power.

The dichotomy presented here between a closed and elitist decision-making process for business and an open and participative process for environmental movements should not be pressed too far. Certainly in recent years business and government have proved more susceptible to the pressures and arguments of environmental groups, especially of those which command expertise and can claim to speak for influential constituencies. At the same time, some environmental groups, notably the big nationally based NGOs, have themselves gained direct access to decision makers through routine consultation, membership of advisory bodies and even privileged access. They have achieved greater potential influence over the policy-making process. But this raises some important questions for them as to how far they may become co-opted and compromised by the need to negotiate solutions. There may well develop a conflict between their accountability to their constituency and their legitimacy in the political process.

These are complex questions about the openness of a political system and the nature of democracies, particularly of the role of formal political representation, which sometimes conflicts with actual societal claims and protests. These questions have been considered from time to time in this series of books (see, for example, Chapter 4 and Chapters 1 and 2 in this volume and Potter, 1996). It does appear that the environmental movement, at least in the Northern world, has developed a greater influence over policy making because of the ability of organisations to engage in greater political participation. This influence has been further developed as the links between the local and the global, in the context of global environmental change, have become more evident. This raises questions about the possible and actual role of the environmental movement and its allies as countervailing powers in what may be called the globalisation of environmental politics.

The environmental movement and the globalisation of environmental politics

Environmental ideologies challenge classical political ideologies for they do not fit into the traditional left–right or labour–capital distinctions. Similarly, environmental organisations cannot easily be sorted along classical political party divides and environmental politics for different reasons challenges conventional politics. Thus, environmental politics and policies, to a greater or lesser degree, both stand outside and cut across the political party system and the traditional division of policy fields and public management tasks; furthermore, they are not confined to any specific political level. Environmental conflicts may be conducted at local, national and global levels at one and the same time. Environmental politics, in fact, links the local to the global just as environmental problems do.

In addition environmental issues are also linked to other global issues, such as peace and development. This globalisation of political issues is one of the most typical features of the so-called 'new social movements', such as the contemporary international peace movement, the human rights movement, the Third World organisations as well as the environmental movement. They are called 'new' social movements to distinguish them from both classical social movements, such as the labour movement which emerged in the 19th century and from previous waves of societal concern about environmental issues such as the early Nature conservation movement, which emerged at the end of the 19th and the beginning of the 20th century. As stated earlier in this chapter, the new social movements can be differentiated as the more or less organised expressions of the so-called demodernising consciousness which emerged in the early 1970s.

These 'new' social movements, like their predecessors, are characterised by a concern to achieve social and political change through collective action. They constitute a form of 'new politics', operating within but also beyond the traditional political system. They combine a variety of values, comprise a multiplicity of organisations (from local activists, via nationally operating green parties, to globally organised NGOs), seek a variety of goals and operate both to shift public opinion and to affect specific decision-making processes. Although generally accepted, it is clear that the concept 'movement' fails to reveal the differences, sometimes even the fragmentation within and between these movements, as they differ in specific objectives, strategies and organisational forms. Though most of them emerged only in the early 1970s, their goals and strategies have since changed, influenced by, among other things, modern communication techniques and the process of globalisation itself. Therefore the concept 'environmental movement' in itself is a broad concept and embraces at least three types of organisation.

First and operating at the local level, are citizens' action groups or citizen-based organisations (CBOs). These may be evanescent, spontaneously arising in response to a perceived threat to local environmental interests and dying as soon as the threat is removed. Or they may develop into a broader movement taking on other issues and reflecting local concerns. The Burgerinitiativen (citizen action groups) in Germany are a good example. Such groups seek to mobilise and reflect local opinion although they are not formally accountable.

Second, at the national level, there are the more formally organised environmental groups which are a form of non-governmental or voluntary organisation. These include the major national bodies concerned with preservation issues and the protection of species, some of which are part of the classical Nature conservation movement which emerged in the early 20th century. Examples of these voluntary associations in the UK are the Council for the Protection of Rural England (CPRE) and the Royal Society for the Protection of Birds (RSPB) and the major campaigning groups based in many countries and having both national and international organisational structures (e.g. World Wildlife Fund, Friends of the Earth and Greenpeace). These groups focus on specific environmental concerns and claim support from their membership and a wider public for their actions (see Chapter 2 for a more detailed discussion of NGOs).

Thirdly, there are the green political parties which seek access to the formal representative political system. Their emergence in different Western countries in the late 1970s and early 1980s resulted from long and fundamental strategic debates within the environmental movement. Although successful from time to time at the local level and despite a certain recognition of their national organisations by governmental authorities, some members and groups within the environmental movement felt the political system was still not open enough to be able to influence political

Plate 10.5 Police presence at a protest against the shipment of spent nuclear fuel flasks into Gorleben in the rural Wendland, Germany. Photo: Andrew Blowers

agenda setting successfully. Consultation and lobbying were not sufficient and therefore part of the environmental movement wanted to enter the political arena itself. This, of course, raises the problem of a possible contradiction between their radical agenda for transforming the political system and their seeking to participate in it. This contradiction has been reflected in the debates and conflicts within the green movement between realist and fundamentalist perspectives, the 'realos' versus the 'fundis' which especially in Germany has aroused great interest. It reflects a principal question for green parties, namely, 'whether a sustainable society can be brought about through the use of existing state institutions' (Dobson, 1990, p.134). In the context of the globalisation of environmental politics, two basic strategic questions for green parties arise: how effective can nationally based strategies be and how can they link these national strategies at a continental and global level?

The environmental movement in its widest definition represents a general societal and political tendency which aims to preserve resources and prevent pollution and thereby seek a more sustainable form of social development. Earlier in this chapter we argued that both the opportunities and the constraints for a comprehensive social change towards sustainability embrace three different but interrelated levels: the individual, the institutional and the political or state level. We can use this distinction here, in order to regroup the strategies of the environmental movement into its three 'target groups': first, the attitudes and values of the general public (the citizen, the consumer, the household, the car driver or the tourist); second, the attitudes and behaviour of institutions (private firms, banks, waste management, water or energy supply companies, etc.); and thirdly, politics in general. As 'politics in general' is too abstract to be a specific aim of action, we see the environmental movement actually operating in two distinctive ways: first, at the level of the values of the general public and second, at the level of specific policies, plans, proposals and projects. The first strategy aims not only to shift the value systems as such, but indirectly to influence both institutional and political changes. The second strategy aims, by focusing on specific decision-making processes, to provoke subsequent changes on a more institutional and structural level. Here it is intended that action against specific decisions will be the lever for more fundamental social and political changes.

Shifts in values

As stated earlier, a shift in values is imperative in order to achieve long-term sustainable development. Such shifts are subtle, often conflicting with other deeply implanted values, but to be effective in creating social change, they must be pervasive and long lasting. There is little evidence that such a situation has yet been reached with respect to the environment. Although 'sustainable development' is universally acknowledged at the level of governments, big business and among environmental movements, neither the idea nor its implications have yet penetrated into the consciousness of the majority of people. Indeed, it is extremely difficult to apprehend, let alone measure, changes in values and their social and political impact.

Yet, there are signs of change. The very fact that sustainable development is now a policy pronouncement at all levels of government and that the Rio process through Agenda 21 and the various conventions is continuing demonstrates how far an

international environmental agenda has been established in a short time. It may be argued that the effective agenda is still dominated by Northern interests in terms of climate change and biodiversity, but the desertification convention developed in the aftermath of Rio shows that Southern interests are being recognised, even if they are not backed by sufficient resources or effective action. As mentioned earlier, most observers discern a convergence at the broader level among the new social movements and NGOs (on environment, peace, human rights, women's rights and Third World development) in their radical critique of modern society. 'This new theoretical project is concerned to find ways of overcoming the destructive logic of capital accumulation, the acquisitive values of consumer society, and, more generally, all systems of domination (including class domination, patriarchy, imperialism, racism, totalitarianism and the domination of nature)' (Eckersley, 1992, pp.20–21). At the more specific level it is undoubtedly the case that the anti-nuclear, the environmental and the peace movements have had a major influence on public attitudes towards nuclear weapons, nuclear energy and, more recently, nuclear reprocessing and waste management.

Impact on policy making

Both at the general and at the more specific level of policy making 'more and more people question whether the global environmental crisis can actually be managed along the lines of the development spiral and the corresponding problem-solving strategies, such as more science and technology, better nation state politics, more efficient economic growth and better education' (Finger, 1994, p.62). Policies aiming at sustainable development in principle are being increasingly articulated and countries are producing their national strategies partly as a follow-up to Rio.

But there is no evidence that fundamental conflicts between growth and environmental conservation are being recognised. For example, the UK's strategy states its basic aims and principles thus:

> Sustainable development does not mean having less economic development: on the contrary, a healthy economy is better able to generate the resources to meet people's needs and new investment and environmental improvement often go hand in hand. Nor does it mean that every aspect of the present environment should be preserved at all costs. What it requires is that decisions throughout society are taken with proper regard to their environmental impact' (HMSO, 1994, p.7).

At this stage it is the idea rather than the practical application of policy that is seeping into governmental statements. Perhaps more progress is being made at the local level as some local authorities try to grasp the practical implications in terms of resource inventories, formulating policy targets and monitoring. But, as environmental values become more pervasive, the fundamental conflicts between contemporary sectoral policies for energy, transportation, agriculture and industry on the one hand and the need for a comprehensive restraint to conserve the environment on the other will be revealed. But, before changes can be achieved at the policy level, shifts in attitudes and behaviour are necessary.

Such shifts are already becoming apparent at the level of specific proposals and projects. We discussed earlier how local communities have been mobilised to resist

polluting or dangerous industries. On a more positive side there are many instances of communities acting to defend environmental values in the form of specific landscapes, areas of natural interest or cultural significance. At this project level, again radical and conservative values intersect to create an environmental consciousness that embraces a wide community of interest.

The political conditions of increasing participation and globalisation have been substantially developed by the emergence of increasingly influential and coherent environmental movements. The fact that they have flourished is the result of changes in Western society and the opening up of areas of influence both outside and within the formal political system.

10.6 Conclusion: major political constraints on achieving sustainability

The analysis in previous sections of the social and political conditions needed for a change towards a more sustainable development seems to lead to an optimistic conclusion. In this last section we do not aim to reverse our arguments and set out a a pessimistic view. We will examine, however, some final questions about the actual role and influence of the environmental movement as an agent for change affecting values and politics and end with an overall assessment of the direction which social and political changes are likely to take.

Changes in public concern and political decision making

At first sight the influence of the environmental movement seems considerable. Operating in different organisational forms and using a variety of strategies and methods, these groups seem to be able to mobilise resources and people, to apply expertise and, by doing so, to influence values and political decisions from local to global. We will consider some of these aspects critically, starting with the presumed changes in values and decision making.

It would be imprudent to overstate the actual impact of environmental movements. While their influence is important, it is not all-pervasive. At the superficial level of public awareness and public concern as measured in opinion polls in the early 1990s, the environment ranks well below other issues such as (un)employment, health, criminality and education. Other issues obviously cause more unease among the general public than the environmental issue. The idea of 'sustainable development' may have excited environmental groups and even governments, but it has hardly penetrated the public consciousness.

At the level of specific policy, plans and projects, environmental protest has sometimes succeeded in preventing an unwanted project or at least in delaying its development or implementation. Different states have introduced particular political procedures or methods, such as cost–benefit analysis and environmental impact assessments to guarantee that environmental aspects of the plans and projects concerned are seriously taken into account. In some cases these methods and procedures

imply an extra, sometimes almost an institutionalised opportunity for the environmental movement to exercise its influence, by bringing in counter-expertise. But, as we stated earlier, it is hard to get empirical evidence that this influence was successful in that it led to substantial changes in the design or implementation of a plan or proposal. And even if substantial changes occurred or if a plan was delayed or cancelled, it is almost impossible to judge whether this was caused by the environmental movements' action or by other political or economic factors. The fast development of the nuclear industry in Western Europe in the 1970s, for instance, was not stopped by environmental protest, whereas its standstill in the 1980s was due to economic factors, such as cost and (lack of) competitiveness.

If the actual influence of the environmental movement on decision making has been somewhat exaggerated, it is also questionable if its influence on agenda setting is as considerable as some observers presume. The environmental movement may have been most influential with respect to agenda setting back in the 1970s, when environmental problems were barely recogniseed as important political issues. Drawing attention to these problems and formulating them was then one of the main tasks of the environmental movement. Nowadays problem formulation on environmental issues is institutionalised as a primary activity of government, with a plethora of departments, inspectorates and other organisations undertaking routine environmental monitoring, regulation and control. If there is a signal function left, it has been taken over largely by environmental scientists, working at universities or in state department laboratories and institutes.

Environmental science as a countervailing power?

This brings us to the role of science and scientists, more specifically to their possible role as a countervailing power against the predominant problem definitions. The environmental movement has been successful in challenging the monopoly of expertise held by the state and business. By deploying counter-expertise, the assumptions, methods and conclusions of experts have been opened up to questioning by both environmental activists and society as a whole. Some commentators have even observed an interdependence, a 'symbiotic relationship', between environmental sciences and environmental movements. 'On the one hand, increased public concern with environmental issues over the past three decades has contributed to expansion of the environmental sciences. On the other hand, environmental groups depend heavily on scientific justifications' (Buttel *et al.*, 1990, p.61).

The scientific community remains of fundamental importance in setting the agenda, while scientific information becomes more important in shaping environmental policy measures. The former is particularly the case with those issues that have been 'discovered' by scientists (acid rain, ozone depletion and global warming) or which require the collection of scientific evidence and careful evaluation (e.g. biodiversity). But as we stated earlier, the role of science in the monitoring of environmental problems and in the designing of environmental policy is not unproblematic (Boehmer-Christiansen, 1994). First of all, there are basic disagreements within the scientific community over the explanation of phenomena and the meaning to be attributed to evidence (which is often incomplete and contested). Society and politics often look for

certainty which the scientific community is not (yet) able to provide. And secondly, environmental problems are socially constituted (a subject that is fully discussed by Liberatore, 1995). As scientists themselves are an interest group seeking power, prestige and resources, they are engaged in a process of problem definition and priority setting which is not disinterested but which also reflects their interests and those of their sponsors. That is not to say that the problems presented by science are no less real, merely to acknowledge that scientific endeavour is itself constrained and influenced by resources, priorities and judgements that are socially conditioned. Therefore the advancement of environmental issues into large-scale and internationally organised research programmes of the UNEP, OECD, EU and other organisations can be seen as a positive result and a symbol of changing values within the scientific community. On the other hand, this concentration of scientific resources and expertise can endanger the scientific independence of those working within such programmes.

The relative openness of the political system threatened?

Since the 1970s, as part of a process of political modernisation in which traditional, often somewhat authoritarian structures were broken down, political systems in the Western world seem to be more open for different kinds of citizens' participation. This process resulted partly from the tremendous efforts of a variety of new social movements, claiming more public participation in politics. It has also enabled environmental concerns to be brought into decision-making processes.

However, the nation state and the formal political system are not the only, perhaps not even the most important form of politics in Western societies. A zone of what Beck calls 'sub-politics' can be identified, which is becoming increasingly significant (Beck, 1992; Beck *et al.*, 1994). This area includes the decision-making areas of business, but also the realm of social movements, including the environmental movement and a whole range of regional and local interest groups. They have developed as the state has retreated. According to Beck, it is a process whereby 'political modernisation disempowers and unbinds politics and politicises society' (1992, p.194). Other political scientists have made similar observations. Like Beck, they suggest that the relative political vacuum left has become populated by groups and organisations which purport to represent a variety of interests, including those with environmental interests. They become engaged in the process of 'shaping society from below' (Beck *et al.*, 1994, p.23).

This seems paradoxical, when there is so much evidence of the increasing centralisation of state power and the decline of local government in the UK and of the increasing dominance of the executive over Parliament in almost all European countries. But at the same time there have been processes of decentralisation and deconcentration in almost all Western states, accomplished by deregulation and privatisation. One of the results of these operations is the growing number of quangos (quasi-autonomous non-governmental organisations) set up to administer a range of former state functions such as public transport, welfare, health, waste management, drinking water supply and education. This combination of centralisation and decentralisation has created an important political area where formal representative politics no longer exist. Quangos are responsible in economic terms rather than in political

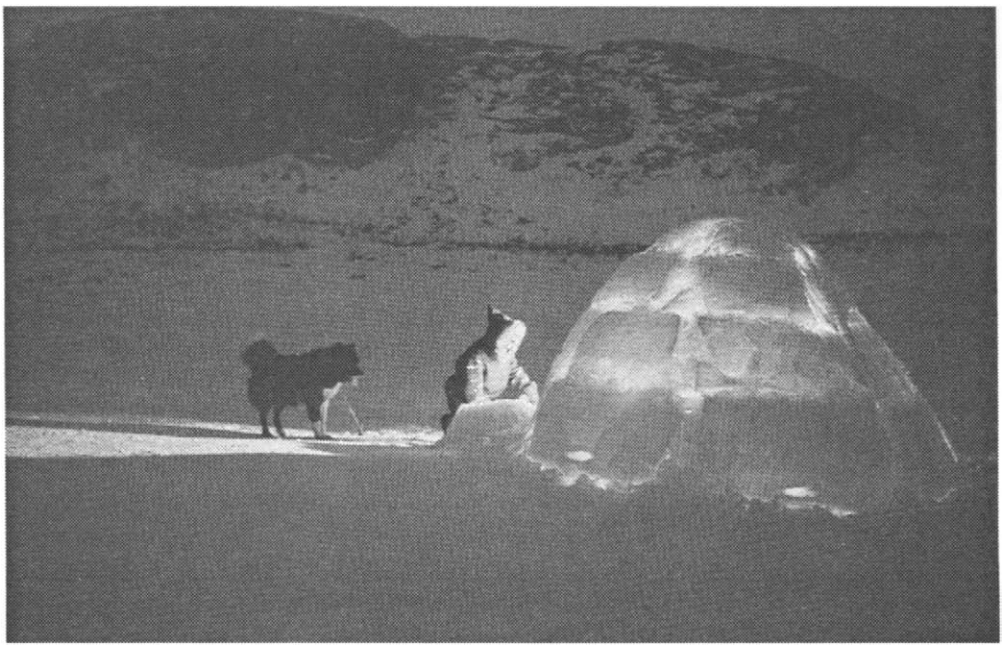

Plate 10.6 Igloo in Labrador, Canada. A harmonious fusion of nature and artifice. Photo: ZEFA

ones, in that they have to meet fixed goals and output figures, rather than function as a public service. It also means that the accessibility and responsibility of these functions and services for citizens is now almost similar to that of private firms. Unfortunately, consumer rights seem to be even weaker than political rights. Therefore, instead of the political system being broken down to give way to a political modernisation process from below, it appears that deregulation and privatisation threaten the hard-won openness of the political system.

10.7 A sustainable future?

Looking back over the various debates in the three volumes of *Environmental Policy in an International Context*, the barriers to a sustainable future on the individual, the institutional and the political level seem enormous. The constraints appear, at the present time, overwhelming. Although dominant value systems may be challenged by the value shifts outlined earlier in this chapter, the challenge may prove too limited and too feeble to bring about any fundamental changes. Inequalities in education and in access to communications media will prevent the diffusion of new ideas. Instead of greater co-operation, social uncertainty and political fragmentation may prevent the development, adoption and implementation of sustainable development policies. Policy development thus may prove too slow to match the pace and scale of global environmental change. Environmental degradation will continue to occur as a product of poverty, inefficiency and exploitation. Although dominant power structures, such as

the nation state and multinational companies, have accommodated some changes in the direction of environmental sustainability, their priorities continue to lie in economic growth. And the form of that growth may continue to be environmentally damaging.

Nevertheless, some of the necessary conditions for change are emerging. They include encouraging the shift towards value systems which support sustainable practices; they imply an effort to overcome inequalities by redistribution of resources or compensation to encourage co-operation; and they urge the development of more democratic and open societies in which participation can flourish, enabling people to influence and be responsible for policies. Although the constraints seem formidable, some of the opportunities for a change have been created and others are still being created. Though slowly, value systems are influenced and power is mobilised to affect policy making. In the context of global environmental politics, the development of the Rio process itself seems to be hopeful, in that it implies the creation of elaborated, institutionalised and monitored international environmental policy regimes. This development, together with the increasing importance of international networks of environmental movements and environmental scientists, establishing the international environmental agenda, provides some grounds for tentative optimism about the prospects for shifting international policy making towards the goals of sustainable development.