

Achieving sustainability

poverty elimination
and the environment



Strategies for achieving the international
development targets

The international development targets

Economic well-being

- a reduction by one-half in the proportion of people living in extreme poverty by 2015.

Social and Human Development

- universal primary education in all countries by 2015;
- demonstrated progress towards gender equality and the empowerment of women by eliminating gender disparity in primary and secondary education by 2005;
- a reduction by two-thirds in the mortality rates for infants and children under age 5 by 2015;
- a reduction by three-fourths in maternal mortality by 2015;
- access through the primary health-care system to reproductive health services for all individuals of appropriate ages as soon as possible and no later than the year 2015.

Environmental sustainability and regeneration

- the implementation of national strategies for sustainable development in all countries by 2005, so as to ensure that current trends in the loss of environmental resources are effectively reversed at both global and national levels by 2015.

While not amenable to quantification, there is a range of qualitative elements of development that are essential to the attainment of the quantitative goals. These include democratic accountability, the protection of human rights and the rule of law.

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Department for International Development

The Department for International Development (DFID) is the British government department responsible for promoting development and the reduction of poverty. The government elected in May 1997 increased its commitment to development by strengthening the department and increasing its budget.

The policy of the government was set out in the White Paper on International Development, published in November 1997. The central focus of the policy is a commitment to the internationally agreed target to halve the proportion of people living in extreme poverty by 2015, together with the associated targets including basic health care provision and universal access to primary education by the same date.

DFID seeks to work in partnership with governments which are committed to the international targets, and seeks to work with business, civil society and the research community to encourage progress which will help reduce poverty. We also work with multilateral institutions including the World Bank, United Nations agencies and the European Commission. The bulk of our assistance is concentrated on the poorest countries in Asia and sub-Saharan Africa.

We are also contributing to poverty elimination and sustainable development in middle income countries, and helping the transition countries in Central and Eastern Europe to try to ensure that the widest number of people benefit from the process of change.

As well as its headquarters in London and East Kilbride, DFID has offices in New Delhi, Bangkok, Dhaka, Kathmandu, Nairobi, Dar-es-Salaam, Kampala, Harare, Pretoria, Suva and Bridgetown. In other parts of the world, DFID works through staff based in British embassies and high commissions.

**Department for International Development
October 2000**

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Foreword by the Secretary of State

This paper is one of a set. Together, they spell out actions which could transform the lives of hundreds of millions of poor people and make the planet a better and safer place for our children and grandchildren. They say what needs to be done to achieve key targets for international development.

These International Development Targets have been agreed by the entire United Nations membership, following a series of summit meetings held by the UN and its specialised agencies over the past ten years or so. The meetings discussed progress in poverty reduction and sustainable development and set targets for measuring that progress.

In the past, targets have often been set and then disregarded. This time, however, the international community is giving them greater weight. In 1996, all the main Western donor countries, grouped together in the Organisation for Economic Co-operation and Development (OECD), committed themselves to a partnership with developing countries and countries in transition from centrally planned economies. The success of this partnership would be measured against key targets from the UN summits. In the following year, the new UK Government made these targets the centrepiece of its 1997 White Paper on International Development. More recently the World Bank and the International Monetary Fund (IMF) decided to co-ordinate their development efforts behind the targets. These targets are listed on inside front cover.

Neither the United Kingdom nor any other individual donor country can achieve the targets alone. The targets are challenging, some particularly so. But if, by working together, we can increase the effectiveness of the international community, our assessment is that these targets are achievable for developing and transition countries as a group by the target date, or soon after in some cases, even though they may not be achieved in each region or country individually. It is clear that each developing country must lead the effort if the targets are to be achieved. If this commitment is lacking civil society institutions need to press their governments to take action as, without a local lead, progress cannot be achieved. The international community, in turn, must provide support for those governments committed to the reforms which are necessary to achieve the targets. Most countries should be able to register very considerable progress towards meeting the targets by the due date.

The present paper is about the environment and its contribution to sustainable development. It looks at the critical need to integrate the environment into all aspects of development. It concludes that protection of the environment is not a technical issue. It is about establishing truly participatory systems of governance, particularly giving an effective voice to the poor and marginalised.

Targets need to be used intelligently. They cannot capture the full richness and complexity of individual and collective transformation that makes for sustainable development. Individual countries should select and debate in normal democratic ways their own measures of achievement. But regular public assessment of how countries as a group and by region are performing against a simple standard is essential, in order to focus development assistance on achieving real outputs. Doing so will show what works and what does not, will provide accountability for the efforts being made in the name of development, and will give impetus to extending basic life opportunities that should be available to all.

Targets also need to be grounded in reality. For this, we should not underestimate the value of good statistics. The political debate in Britain was strongly influenced by 19th and early 20th century surveys documenting the reality of grinding poverty in our own society. A similar effort of political will is needed in many developing and transition countries if they are to give sufficient emphasis to the needs of their own poor people. Better quality and more accessible information on people's standards of living is one essential element in creating that will. Much work is needed to improve the collection of reliable and comparable data, and to strengthen local statistical capacity.

These papers do not attempt to go into detail; that will follow, country by country and institution by institution, from ongoing discussions with our partners in poor countries and in the international community. Many detailed proposals for action in pursuit of the targets are published, or soon will be, as Country and Institutional Strategy Papers. Our bilateral programmes are being reshaped. We are also encouraging the multilateral development institutions in the same direction. One example of this is the policy of the International Development Association – the concessional lending arm of the World Bank – which following its Twelfth Replenishment now focuses on poverty elimination in the context of the International Development Targets. Another example is the enhanced Heavily Indebted Poor Countries

Debt Initiative, agreed at the IMF and World Bank in September 1999, which has started to deliver faster, deeper and broader debt relief to countries committed to eradicating poverty. The G8 Summit in Okinawa endorsed the targets and asked for annual reports on progress.

We must also take advantage of the opportunities of 'globalisation', to help achieve the International Development Targets. In November 2000, the UK Government will publish a second White Paper on International Development, focusing on managing the process of globalisation to the benefit of poor people. The White Paper will include commitments by the Government covering a wide range of issues, such as international trade, relevant to the way developing countries participate in the global economy.

This paper and the others in the collection assess the challenge and set out an overall approach and strategy for

our involvement in achieving the development targets in a clear, focused and realistic way. Each reflects a process of consultation in the United Kingdom and overseas.

I hope that you will find them a valuable statement of what the UK Government will do and how the United Kingdom seeks to use its influence to make a reality of the targets, to which we and the rest of the United Nations membership are committed. We stand ready to be judged against our delivery of this strategy. And the whole development community – governments, international agencies, civil society organisations – should be judged collectively against delivery of the targets.

CLARE SHORT

Secretary of State for International Development

Executive summary

1. This paper looks at the ways the international community might attempt to meet the International Development Target for the environment, as part of the wider goal of sustainable development. The International Development Target states that “*there should be a current national strategy for sustainable development in the process of implementation in every country by 2005, so as to ensure that current trends in the losses of environmental resources are effectively reversed at both global and national levels by 2015*”. The paper argues that development will not be sustainable without effective management of the environment, and that equal attention needs to be given to the three social, economic and environmental pillars of sustainable development. It emphasises the need to take a longer-term perspective, particularly relevant when dealing with environmental problems and issues.
2. Most environmental trends are adverse, with significant detrimental impacts on the health and livelihoods of poor people. The costs of environmental degradation are large and should be routinely included in estimates of real gross domestic product. The main causes of environmental degradation are unsustainable consumption, particularly of the rich, both in developed and developing countries; market failures, which cause goods and services related to the environment to be systematically undervalued, and therefore partly result in unsustainable consumption; and poor and ineffective governance, which leads to the environment being relatively neglected and not integrated into the development of national policies and programmes. A longer-term perspective is required, to take advantage of environmental opportunities, or to take account of environmental costs or impacts.
3. There are many misconceptions regarding the links between poverty and the environment. This paper argues that progress towards meeting the International Development Target can make a significant contribution to a sustainable reduction in the number of people living in absolute poverty. The poor suffer disproportionately from increasing environmental degradation. They are particularly susceptible to the impacts of natural disasters. Nevertheless, they are prepared to invest in the environment if they see tangible benefits and the potential for economic improvement. There should be a greater focus on the underlying causes of poverty, which are often environmental, rather than simply dealing with the consequences of poverty.
4. National strategies for sustainable development should be seen as processes not new plans. They should seek to ensure that strategic planning takes account of sustainable development issues. They can be compatible with other initiatives such as the World Bank's Comprehensive Development Framework and the Poverty Reduction Strategies which are being adopted in several countries, if these initiatives successfully incorporate the principle of sustainability. A convergence of the three initiatives is both possible and desirable. Work is currently proceeding in the Development Assistance Committee (DAC) of the Organisation for Economic Co-operation and Development (OECD) on developing criteria to assist in determining whether a country has successfully incorporated considerations of sustainability in its development policies and programmes. The UK and the European Commission are leading this work. It will be completed in the first half of 2001. It is proposed that the international conference planned for mid-2002, ten years after the 'Earth Summit' at Rio, should focus on the extent to which countries have effective sustainable development processes in place.
5. Actions to meet the International Development Target are looked at primarily from a poor country perspective. Opportunities for reducing poverty and simultaneously protecting and improving the environment are described. Emphasis is placed on working with the poor and on improving often weak and ineffective systems of governance. Mainstreaming environmental considerations into country policies and programmes, and encouraging the private sector and civil society to take similar action, are both important. There are many opportunities to meet local environmental priorities while also contributing to global concerns, such as the build-up of greenhouse gas emissions in the atmosphere. The UK will contribute to this international agenda through its bilateral programme and the established relationships it has with a range of multilateral institutions. It will also work to ensure policy coherence in the UK and within the European Union.
6. More attention needs to be given to the indicators for the target. It requires two related but different kinds. This reflects the fact that the target combines the

implementation of national strategies for sustainable development with the reversal in the loss of environmental resources. The most appropriate indicators will vary from country to country. They should be identified at a national

level or sub-national level as appropriate. Two global indicators are taken as proxies to measure global trends: the size of the hole in the ozone layer and the concentration of greenhouse gases in the atmosphere.

1. Target statement

Introduction

1.1 In a report issued at the end of 1998, the United Nations Environment Programme (UNEP), the World Bank and the National Aeronautics and Space Administration¹ summarised why the environment is important and should not be considered in isolation. *“The Earth’s physical and biological systems provide humans with essential goods and services. A set of physical, chemical and biological processes link global environmental problems so that changes in one have repercussions for others. Actions taken to meet human needs have local, regional and global consequences. The same driving forces – population size, consumption levels and choice of technologies – underlie all global environmental problems. All people affect the environment, and vice versa, but the rich have a disproportionately higher impact and the poor tend to be the most vulnerable to the effects of environmental degradation”*.

1.2 This paper does not look at the overall state of the world’s environment. It concentrates on the International Development Target and in particular the need for development to be sustainable, taking due account of impacts on the environment. Environmental outcomes are inextricably linked to the actions of people, firms and public and private institutions. For development to be truly sustainable, the environmental dimension must be mainstreamed² throughout the policies and programmes of countries.

Achieving sustainable development

The sustainable development target

1.3 In 1987, the Brundtland Commission³ defined sustainable development as *“development which meets the needs of the present without compromising our ability to meet those of the future”*. The UK’s own national strategy for sustainable development⁴ defines sustainable development as *“a better quality of life for everyone, now and for generations to come”*. Both these definitions make clear that poverty reduction and better management of the environment is central to sustainable development.

1.4 This paper examines the effective management and protection of the world’s environment, encapsulated in the International Development Target which states that *“there should be a current national strategy for sustainable development in the process of implementation in every country by 2005, so as to ensure that current trends in the losses of environmental resources are effectively reversed at both global and national levels by 2015”*.

1.5 The International Development Targets originate in the United Nations conferences which took place in the 1990s. The specific environment target stems from the UN Conference on Environment and Development held in Rio de Janeiro in 1992. The Conference also agreed Agenda 21, a programme for global sustainable development, as a blueprint of action into the 21st century. They were brought together in the document⁵ issued by the Development Assistance Committee of the OECD in 1996. In 1997, the UN General Assembly Special Session also decided that *“by 2002, the formulation and elaboration of national strategies for sustainable development which reflect the contributions and responsibilities of all interested parties should be completed in all countries, with assistance provided, as appropriate, through international co-operation”*.

1.6 The target is complex. It combines general sustainable development issues with the environment, without really making a distinction between them. It is the first target against which progress will be formally measured.

1.7 The target is especially challenging for two reasons:

- it includes the intermediate output (national strategies for sustainable development) in addition to the final outcome (reversal of loss of environmental resources).
- relative to most of the other targets, progress is particularly hard to measure. Sustainable development strategies are processes. Their assessment will require a qualitative judgement. The reversal of environmental degradation is defined broadly and there is very

¹*Protecting our planet, securing our future*, UNEP, US NASA, World Bank, November 1998.

²The dictionary definition of the “mainstream” is the “prevailing trend of opinion, fashion”. It is used throughout this paper as a proxy for the attributes of integration, awareness and promotion.

³*Our common future*, World Commission on Environment and Development 1987.

⁴*Improving the quality of our life*, DETR, May 1999.

⁵Shaping the 21st century: the contribution of development co-operation, OECD 1996.

limited data available to measure progress. In addition, the environmental resources of each country will differ, so there is no international blueprint for the best indicators.

1.8 Sustainable development strategies are an important input to achieve the target of reversing the loss of environmental resources. But many other actions are also clearly required. These include private sector initiatives, changes in technology and adherence to obligations set out in multilateral environmental agreements. In addition, sustainable development strategies, given their broader remit, should address more than environmental resources.

National strategies for sustainable development

1.9 The DAC definition⁶ of national strategies for sustainable development is that they are “*a strategic and participatory process of analysis, debate, capacity strengthening, planning and action towards sustainable development*”. The key words are process and sustainable. The UK White Paper⁷ defines them as “*the main vehicle for integrating pro-poor economic growth with social improvement and a responsible approach to environmental management*”.

1.10 A national strategy for sustainable development represents the policies, plans, processes and actions that a country is taking to move towards sustainable development. This could be a single umbrella strategy (drawing together initiatives in different areas) or the aggregate of a range of co-ordinated, existing strategic planning approaches. It is neither an environmental action plan, nor is it a separate, stand-alone strategy.

Strategic planning for sustainable development: emerging consensus

1.11 Each country will need to decide how to develop its own strategic processes for sustainable development. But there is growing international consensus on some of the key principles. They include:

- putting people at the centre, particularly the poor;
- securing high-level political commitment and an influential lead institution;

- orienting the strategy to focus on process and outcome;
- building country/local ownership;
- building on existing processes and strategies;
- adopting a comprehensive approach which integrates economic, social and environmental dimensions;
- ensuring effective monitoring, learning and improvement;
- setting targets and priorities; and
- strengthening capacity.

1.12 These principles describe a set of desirable processes and outcomes, yet allow for local differences. They do not represent a checklist of criteria to be met. There is nothing new in them – many are entirely consistent with basic good strategic planning. But experience shows that they are seldom delivered in practice. The challenge is strengthening incentives and securing commitment to change.

1.13 New country-level planning frameworks offer a significant opportunity to put these principles into practice. The Comprehensive Development Framework and Poverty Reduction Strategies, and the National Visions developed by some countries encompass a number of them and demonstrate a significant convergence of approach between the country-led frameworks and the criteria for sustainable development strategies.

1.14 The Comprehensive Development Framework – the attempt to integrate all development efforts being piloted by the World Bank – seeks a better balance in policy-making by highlighting the interdependence of all elements of development – social, structural, human, governance, environmental, economic, and financial. It emphasises partnerships among governments, donors, civil society, the private sector, and other development actors. It also stresses country ownership of the process.

1.15 Poverty Reduction Strategies⁸ (which need to be developed to gain access to multilateral debt relief and concessional lending) also incorporate a number of the above principles. The strategies “... *should be country-driven, be developed transparently with broad participation of elected institutions, stakeholders including civil society, key donors and regional development banks, and have a clear link with the agreed international development goals (targets).*”

⁶Assisting developing countries with the formulation and implementation of national strategies for sustainable development: the need to clarify DAC targets and strategies, DCD/DAC(99)11, March 1999.

⁷Eliminating world poverty, a challenge for the 21st century, DFID, November 1997.

⁸“Development Committee Communiqué”, April 17, 2000.

1.16 In order to integrate sustainability into these frameworks, particular attention will need to be devoted to those principles where commitment in the past has been weak or non-existent. The challenges include ensuring that frameworks address the structural causes of poverty, including where these are environmental in origin; balance short-term priorities with long-term sustainability; and are truly country-led.

1.17 Country examples for Ghana, Bolivia, Uganda and the United Kingdom are set out in more detail in Annex I. They show the diversity of approaches consistent with sustainable development strategies. Apart from the UK, none of the other country examples is labelled as a strategy for sustainable development. This is not important. The critical issue is the strengthening of a country's strategic

Box 1: Poverty and the environment – some misconceptions⁹

New evidence challenges a number of entrenched assumptions about poverty–environment interactions.

Most environmental degradation is caused by the poor.

Globally, most environmental degradation is caused by the non-poor as the consumption levels of the poor are still low relative to the rich.

Poverty reduction necessarily leads to environmental degradation.

Studies have failed to show a common pattern in the relationship between poverty and resource use. The linkages between poverty and the environment are complex and require context specific analysis – there is no simple causal relationship. There is sufficient evidence to show that the generalisation that poverty reduction and concern for the environment are incompatible does not hold true.

The poor are too poor to invest in the environment.

The conventional wisdom has been that poor people are too impoverished to mobilise resources for enhancing the environment. In some cases this is true. However, numerous experiences now demonstrate that when incentives are favourable, even the poor can mobilise enormous resources, particularly labour.

The poor don't care about the environment.

There are numerous examples to show poor people often value the environment strongly, both as a resource base, and for cultural, aesthetic and religious reasons.

Poor people lack the technical knowledge for resource management.

It is often assumed that a lack of technical knowledge is a key constraint to poor people's management of natural resources. Indeed, when poor people move to areas with new ecological regimes, or when something happens to change the balance under which their old technology developed, a period of adjustment is required. However, poor people are often blamed for things that are not their fault. For example, shifting cultivation has been blamed for destroying the environment, yet in some circumstances it is the most sustainable agricultural practice. Also, evidence is increasingly showing that poor people have an enormous store of what is sometimes termed indigenous technical knowledge, such as the use of medicinal plants, water harvesting structures, fishing sites and so on, but this knowledge is often undervalued or completely ignored. More research is needed to fully appreciate the logic of poor people's management practices.

planning process to draw together existing plans and policies and ensure the commitment to the principles of sustainable development.

The international development target and the elimination of poverty

The linkages

1.18 The achievement of both the interim and final target would make significant contributions to poverty elimination. Effective sustainable development processes should help poor people pursue sustainable livelihoods. They create opportunities for marginalised and vulnerable groups to participate in decision-making affecting their livelihoods and promote pro-poor economic growth and sound environmental management. They also encourage transparency, accountability of governance structures and institutions which are more responsive and accountable to the needs and priorities of poor people.

⁹Attacking poverty while protecting the environment: towards win-win policy options, John Ambler, July 1999. Background technical note produced for the United Nations Development Programme/European Commission poverty and environment initiative.

1.19 Reversing the losses of environmental resources has a direct impact on poverty elimination. The vast majority of poor people in developing countries, particularly those living in rural areas, rely on natural resources for their livelihoods. The state of the environment, therefore, has important implications for them. The existence of more productively and sustainably managed natural resources from which poor people can derive sustenance and income is an important element in reducing rural poverty.

1.20 Reducing environmental hazards due to unsafe water, air pollution, inadequate sanitation and waste disposal is also central to poverty reduction, particularly in urban areas. Poor people, especially women and children, are disproportionately affected by the health problems caused by these hazards. They are affected directly through ill-health, accidents, injury and premature death and indirectly through the consequent loss of income or their livelihood.

1.21 A clear distinction should be made between environmental change and environmental degradation. The latter is defined in this paper as processes likely to cause long-term or irreversible damage to livelihoods, especially those of poor people. There will always be an element of subjectivity in assessing when change deteriorates to degradation, or indeed where the thresholds are for irreversible damage. But concern for the environment is not incompatible with development. The key is effective planning and management of environmental change.

1.22 The poor have identified security as one of their key concerns. Poor people are particularly exposed to sudden natural shocks (for example, floods) and longer term trends of environmental degradation (for example, declining soil fertility). The resulting vulnerability translates into declining and insecure incomes and the sudden loss or gradual erosion of the asset base of the poor. Enhancing the security of the poor, therefore, has a key role to play in eliminating poverty. The consideration of environmental issues in development processes and interventions can help address current trends of environmental degradation and prevent new adverse trends to which the poor are vulnerable. It can also mitigate against and reduce the impact of extreme and sudden natural shocks.

1.23 In developing their own environment strategy, the World Bank have come to similar conclusions.¹⁰ The links they establish between poverty reduction and improved environmental outcomes relate to improvement in the health of poor peoples; enhancing the livelihoods of poor people who depend on natural resources; and reducing the vulnerability of poor people to environmental risks, such as natural disasters.

Policy implications

1.24 The poor are inherently more vulnerable to general environmental problems, and a number of specific environmental problems (for example, indoor air pollution, soil degradation) affect the poor disproportionately. Two major conclusions flow from this:

- general environmental improvements are likely to benefit the poor;
- policies which address those environmental problems which affect the poor disproportionately will have a strong pro-poor impact.

Scope for achieving the international development target

1.25 National strategies for sustainable development should be in implementation by 2005 and in place as early as 2002. The UN conference scheduled for 2002, 10 years after the Rio conference, should be used to encourage all countries to focus on the target. However, it is not yet agreed what criteria will be used to assess whether an effective strategy is in place. The UK and the European Commission are jointly leading a DAC task force which will, in co-operation with representative developing countries, assist in formulating such criteria. Results from the task force will be available in early 2001. It may be sensible to formally review the interim target towards the end of 2001, immediately prior to the Rio+10 conference. Given that most developing countries will have formulated Poverty Reduction Strategies by this stage, it is important that they reflect sustainability principles.

1.26 The target is complex. Although they will not be applicable to all countries, the indicators to measure trends in environmental degradation have been agreed (see section 6). There is some uncertainty as to whether the target means adding to environmental resources by 2015 or simply slowing the rate at which such resources are

¹⁰Towards an environment strategy for the World Bank Group: a progress report and discussion draft, May 2000.

depleted. Environmental indicators are often difficult and costly to identify and collect. National trends are generally more important to countries than global trends. Aggregation of environmental indicators is very difficult. But the trends in most individual indicators are negative, and have been deteriorating for some years. Without radical changes in the choices that people make, whether brought about by changes in technology, governance or other means, current trends in losses will not be reversed by 2015. Some of the more important changes that could be made are outlined in this paper.

1.27 Appropriate national and local indicators and criteria should be developed as part of the process. This is the approach taken in the UK in our own sustainable development strategy. Ten 'headline' indicators¹¹ have been developed which give a broad overview of trends. A further 150 indicators focus on specific issues and identify areas for action.

Links with other targets

1.28 Environmental concerns and issues must be integrated into development policies and programmes. It follows that there are close links with the strategies for meeting other International Development Targets. There are obvious synergies between the environment and economic targets, particularly with respect to the potential opportunities that sound environmental management presents for sustainable growth. These must be explicitly taken into account when forecasting over a 15–20 year time horizon.

1.29 This paper also highlights the importance of appropriate institutional and governance frameworks which emphasise transparent and accountable decision-making, coupled with secure property rights, linking to strategies on gender equality, effective governance and human rights. Effective environmental management is crucial to targets for water and sanitation. A healthier and safer physical and social environment is one of the key requirements if developing countries are to attain the international health targets. Universal primary education will broaden opportunities for raising environmental awareness and respect for others.

¹¹The headline indicators relate to the components of sustainable development, i.e. maintaining high and stable levels of economic growth and employment; social progress which recognises the needs of everyone; effective protection of the environment; and prudent use of natural resources.

2. Present position: the challenge

Introduction

2.1 The environment is under threat. The demands placed on it to provide resources for human activity and to absorb wastes have grown rapidly with rising population and increasing per capita consumption. Attempts to address environmental problems have achieved mixed results: Box 2 sets out some of the environmental successes and failures of the last 30 years. Annex 2 gives brief details of the main multilateral environment agreements.

Box 2: Some environmental successes and failures¹²

2.2 Inadequate protection and conservation of the environment has led to substantial direct and indirect impacts on health and livelihoods and increased the vulnerability of poor people throughout the world. The most pressing environmental problems experienced vary greatly from region to region, and country to country, and defy single global solutions. Many environmental problems are causing damage far beyond their local sites of origin; others, such as climate change, constitute a global threat. In addition, new environmental problems are emerging. This section considers these problems and highlights dominant trends and challenges that need to be tackled in aiming to meet the International Development Target.

Successes

- The first international steps – the United Nations Framework Convention on Climate Change and its Kyoto Protocol – have been taken on global climate change.
- The public is now much more concerned about environmental issues. Popular movements in many countries are forcing authorities to make changes.
- Voluntary action taken by many of the world's major industries is reducing resource use and eliminating waste. Increasingly, it is recognised that what is good for the environment can also be good for business. This may do much to reverse trends for which industry itself was originally largely responsible.
- Governments in developed regions have been markedly successful in reducing air pollution in many major cities.
- Deforestation has been halted and reversed in parts of both Europe and North America.
- Local Agenda 21 initiatives have proved effective in developing and implementing sustainable policies that involve both communities and political agencies.
- The ozone layer is expected to have largely recovered within half a century as a result of the Montreal Protocol.

Failures

- Global emissions of CO₂ reached a new high of nearly 23,900 million tonnes in 1996 – nearly four times the 1950 total.
- Some 20% of tropical forests was lost from 1960 to 1990.
- Losses to biodiversity have always occurred as a result of human activity but the process is accelerating more than ever before.
- Studies suggest that if present consumption patterns continue, two out of every three persons on Earth will live in places or countries without adequate water by 2025.
- More than half the world's coral reefs are potentially threatened by human activities, with up to 80% at risk in the most populated areas.
- Exposure to hazardous chemicals has been implicated in numerous adverse effects on humans from birth defects to cancer. Global pesticide use results in 3.5–5 million acute poisonings a year.
- Some 20% of the world's susceptible drylands are affected by soil degradation, putting the livelihoods of more than one billion people at risk.

¹²Global Environmental Outlook, 2000, UNEP, September 1999.

Environment and health

2.3 Environmental factors are responsible for almost a quarter of all disease in developing countries. The poor, particularly women and children, are most affected by environmental health problems. The most important hazard, particularly for urban populations in developing countries, is faecal contamination of water and food due to poor or non-existent excreta disposal systems and inadequate hygiene, compounded by unreliable and unsafe domestic water supply¹³. As indicated in Table 1, approximately 90% of the burden of diarrhoeal disease is attributable to environmental factors. Improving access to clean water and sanitation is the most significant environmental priority for the poor in developing countries.

Table 1. Environment and the burden of disease¹⁴

Disease	Global disability-adjusted life years (000's)*	Fraction attributed to environmental causes (%)
Acute respiratory infections	116,696	60
Diarrhoeal diseases	99,633	90
Vaccine preventable diseases	71,173	10
Tuberculosis	38,426	10
Malaria	31,706	90
Unintentional injuries	152,188	30
Intentional injuries	56,459	n.e.
Mental health	144,950	10
Cardio-vascular disease	133,236	10
Cancer	70,513	25
Chronic respiratory diseases	60,370	50
Total diseases	975,350	33
Other diseases	403,888	n.e.
Total all diseases	1,379,238	23

*This equates to the full years of life lost as a result of disease, including an adjustment for the effects of disability.
n.e. – not estimated

2.4 There are other significant hazards. Ninety per cent of the global burden of malaria, which is estimated to kill one in twenty children under five years of age in sub-Saharan Africa, is attributable to environmental factors. The spread of diseases such as malaria will also be exacerbated

by climate change. Around one billion people are affected by problems caused by the use of traditional biomass fuels (for example, dung, charcoal, crop residues, wood) for cooking and heating. They are exposed to high levels of indoor pollution from cooking and heating with inefficient fuels in poorly ventilated areas. Estimates¹⁵ suggest that indoor air pollution contributes to acute respiratory infections that kill some four million infants and children a year and decreases the overall health and life expectancy of millions more women and children. The World Health Organisation (WHO) has declared indoor air pollution one of the four main risk factors for ill-health globally, and a major maternal and child health problem in the developing world.

2.5 In many newly and rapidly industrialising regions of the world, urban populations are in double jeopardy, facing traditional environmental health problems as well as emerging problems associated with industrial pollution and economic growth. In Bangkok alone, the annual cost of air and water pollution is estimated at \$2 billion¹⁶. Inefficient collection, storage and disposal of municipal and hazardous wastes results in the spread of disease and localised pollution. Rural populations also suffer exposure to hazardous chemicals. Poor farmers and farm workers often use pesticides without training or protective clothing and are often unable to read instructions. As many as 25 million agricultural workers may be poisoned each year, and hundreds of thousands die¹⁷.

Environment and livelihoods

2.6 One of the main environmental threats to the livelihoods of the rural poor in developing countries is soil degradation, estimated to affect some 1.9 billion hectares of land globally and the livelihoods of more than one billion people. Many of the areas in which the rural poor live are fragile and can easily be rendered non-viable by small changes in their ecology.

2.7 Deforestation continues at high rates in certain developing countries. As a result, communities are often deprived of valuable forest resources such as wood products, food and medicine. This is in addition to the serious impact on nutrient recycling, soil stabilisation and

¹³Proposals for dealing with this issue are set out in the companion DFID paper on *Addressing the water crisis: healthier and more productive lives for poor people*.

¹⁴*The global burden of disease: a comprehensive assessment of mortality and disability from diseases, injuries and risk factors in 1990 and projected to 2020*, Harvard School of Public Health, Murray CJL & Lopez AD, eds, 1996.

¹⁵*Rural energy and development: improving energy supplies for 2 billion people*, World Bank, 1996.

¹⁶*The environment in times of crisis: Asia and donors after the 1997 financial crisis*, Peter Dauvergne, AusAID.

¹⁷*Human Development Report*, 1998, UNDP.

local and global climate change. Degradation of coastal areas is leading to the destruction of ecosystems, such as mangroves and coral reefs, which are important for the sustainability of fish stocks and coastal protection. One of the world's greatest ecological disasters is the drying up of the Aral Sea in Central Asia as a result of centrally planned, poorly conceived irrigation schemes.

2.8 Biodiversity losses are increasing as a result of both natural and human phenomena. Some of the highest rates of change are in developing countries. Rapidly growing populations are placing ever greater demands on ecosystems as are increases in natural, resource-based exports.

2.9 Almost all population growth in the world is currently taking place in areas where freshwater is in short supply. Increasing demand threatens the quantity, reliability and quality of water supplies. Over-abstraction of surface waters and groundwater is common; river flows are often drastically reduced. Problems include falling water tables, vegetation and habitat loss, siltation, subsidence and salt-water intrusion in coastal aquifers. The problems are compounded by pollution of groundwater and surface waters. This further constrains water use options, can create or worsen health problems and leads to additional degradation of river and lake ecosystems.

Environment and vulnerability

2.10 Poor people are vulnerable to the effects of natural disasters and the impact of conflict on their lives. The number of major natural catastrophes over the past decade

has tripled when compared with the 1960s, while the rate of economic losses associated with them has increased by a factor of almost nine during the same period¹⁸. The frequency and severity of extreme weather events is likely to increase as a result of climate change. Natural disasters now have a far greater and disproportionate impact upon the poor, because a growing proportion of them live and work in places that are more vulnerable to disasters. In its annual report, the Red Cross estimates that 1998 was the first year in which the number of refugees from natural disasters exceeded those displaced as a result of war. Environmental stress alone rarely leads directly to conflict. It usually contributes indirectly to conditions – political, social or economic – in society which result in, or exacerbate, conflict. However, environmental degradation can escalate into violence. Examples include severe water shortages, widespread desertification, health-threatening toxic contamination, and refugee flight from environmental wastelands.

Regional environmental problems

2.11 The wide range of environmental problems occurring throughout the world is testament to the complexity of the interactions taking place between human populations and their environment. Although there are many recurring themes, experience has shown that there are few, if any, solutions that will work everywhere. Solutions need to be carefully tailored to the specific circumstances of the country or region if they are to be sustainable.

Box 3: Regional environmental problems

Africa

Major environmental problems include deforestation, soil degradation and desertification, declining biodiversity and marine resources, and deteriorating water and air quality. Land degradation is a key factor in constraining food production to levels below the current average rate of population increase. Sixty-five per cent of agricultural land in Africa has been affected by soil degradation since 1950. Crop yields in Africa could be halved within 40 years if degradation of cultivated land continues at present rates. Fourteen countries are subject to water stress or water scarcity, and a further eleven countries will join them by 2025. Urbanisation is an emerging issue in Africa, and is associated with various environmental health threats.

Asia

High population densities, economic growth and industrialisation are serious environmental challenges. Land degradation is, again, a key issue. In India, for example, 27% of the soil has been affected by severe erosion. In Pakistan, salinisation from irrigation has reduced crop yields by 30%. Increasing habitat fragmentation has depleted the wide variety of forest products used as an important source of food, medicine and income for indigenous people. The forest fires in South-East Asia in 1997-98 caused extensive environmental damage, and an estimated health cost of \$1.4 billion. Water supply is a serious

¹⁸*Emerging environmental issues*, paper presented to the UNEP Ministerial Special Session, Malmo, 29-31 May 2000.

problem, and freshwater availability will become a significant constraint. Many rural fishing communities are threatened by the degradation of coastal habitats and the spread of unsustainable aquaculture practices.

Latin America

There are two major environmental problems. The first is the lack of effective environmental planning in urban areas, where 75% of the population now live. This has led to poor environmental health, ineffective solid waste management, disposal and air pollution, exacerbated by overcrowding and insanitary conditions. The second is the depletion and destruction of forests in the Amazon basin, and biodiversity held within them. Latin America contains almost 70% of the world's tropical rain forests. Natural forest cover is decreasing at over 1% a year. This is a major threat to biodiversity and also contributes to global warming. The region is also prone to natural disasters, most recently Hurricane Mitch in Honduras in 1998 and the flooding in Venezuela at the end of 1999.

Central and Eastern Europe and Central Asia

This region has an enormously costly environmental legacy, and is home to many of the world's biggest environmental disasters. Many of these problems are of national significance and affect both the health and livelihoods of the poor, as well as impeding future economic growth and foreign investment. The Chernobyl disaster in Ukraine in 1986 led to an estimated 500,000 people being exposed to health threatening levels of radiation. Numerous other incidents and nuclear trials have also led to large numbers of people being exposed to unacceptable radiation levels. Industrial pollution, although decreasing as a result of industrial decline, remains widespread, and in many cases threatens public health. Public environmental infrastructure is often inefficiently managed. At the same time, new problems are emerging – growing solid waste problems due to changing consumption patterns, rapid increases in urban transport leading to increased urban air pollution and uncontrolled development in urban areas without proper environmental infrastructure. As a result, levels of air, soil and water pollution in many urban areas are above levels recognised to be safe.

Small island states

The economies of small island states are highly dependent on the natural and physical environment. They are vulnerable to natural and environmental disasters and have limited capacity to respond and recover. Low-lying islands (for example, Tuvalu, Maldives) are at risk from sea-level rise as a result of climate change. Mountainous islands are susceptible to inappropriate conversion of steep slope forests for agriculture with consequent soil erosion, landslides, damage to infrastructure, flooding of coastal areas, sedimentation of coral reefs and general degradation of fragile coastal environmental resources on which some of the poorest communities depend for their livelihoods. The widespread use of agricultural chemicals particularly in mono-crop production systems (for example, bananas, sugar) is a significant source of pollution with measurable impacts on water quality for human consumption and recreation, as well as on coral reefs and fisheries. Tourism depends on healthy coastal environmental resources and marine biodiversity, but itself contributes to environmental degradation.

Western Europe and North America

Until very recently, this region suffered many environmental threats associated with industrialisation and the unsustainable use of natural resources. While many of these threats have now been reduced, new environmental threats are emerging. Road transport is now the main source of urban air pollution, while emissions of other pollutants are still rising. Per capita energy use is among the highest in the world. Stocks of some commercial fish have declined or collapsed. There are concerns about exposure to pesticides and other toxic chemicals, food hygiene and the use of genetically modified organisms. Important decisions need to be made that will determine whether the economic activity and patterns of production and consumption of the region will become more sustainable.

Trans-boundary and emerging environmental problems in the 21st century

2.12 Environmental problems do not respect national boundaries. Conflict over access to shared water resources is growing in many regions of the world. Air pollution from one country can lead to environmental health impacts in another. Persistent organic pollutants used in one country can have effects in countries thousands of miles away.

2.13 The emission of substances that cause stratospheric ozone depletion is another important example of a trans-boundary environmental problem. The production and release of ozone depleting substances from China can cause skin cancer in Latin America and Australasia. Action to address damage to the ozone layer through the Montreal Protocol was one of the first concerted international efforts to protect the environment and is seen as a model for other global environmental problems. Gradual phasing out of technology which produces or uses ozone depleting substances has led to some improvement in the condition of the ozone layer, but continued enforcement of the Protocol is vital for the problem to be controlled.

2.14 Climate change is the quintessential global environmental problem. It is immaterial from where a ton of CO₂ is released into the atmosphere. Its effect on global warming will be the same. Consequently, changes in climate can only be dealt with by global agreement. The objective of the Kyoto Protocol to the UN Framework Convention on Climate Change is that developed countries and countries in transition should collectively reduce their greenhouse gas emissions by 5% below 1990 levels by 2008–2012.

2.15 The impact of climate change is likely to constitute one of the biggest global environmental problems for the 21st century. Despite the progress made so far through international negotiations much more action is needed if atmospheric concentrations of greenhouse gases are to be stabilised at an acceptable level. The effects of climate change are uncertain and are likely to vary greatly between regions. Rainfall is likely to become less predictable and extreme weather patterns more common. Rising sea levels could threaten the lives of millions, with Bangladesh estimated to lose 17% of its land area and

Egypt 12% from a one metre rise in sea level¹⁹. The overall impact of a doubling of CO₂ in the atmosphere would be to reduce the GDP of developing countries by an estimated 2–9%, compared with 1–1.5% for industrial economies²⁰.

2.16 Genetic modification technologies demonstrate how the latest technology can offer potentially very important benefits for the poor and yet also pose environmental risks which require careful appraisal and control. Potential benefits for people and the environment include increased food security and employment; less use of pesticides; and improved yields and nutrition. The Food and Agriculture Organisation of the United Nations (FAO) estimates that to meet the needs of a projected world population of eight billion or more in 2020, food production will have to double. Whether that can be achieved with conventional agricultural technologies is uncertain.

2.17 There is not much understanding of the possible environmental consequences of widespread release and use of genetically modified organisms (GMOs). An agreement on biosafety was negotiated in Montreal in January 2000. It will give developing countries the legal ability to take decisions about whether to import GMOs that may affect their biodiversity. In working through its implications, it will be essential to support developing countries in building their practical capacity to take such decisions.

2.18 World trade flows are growing rapidly and global production patterns are shifting as countries develop sectors in which they have a comparative advantage. Increased economic growth is often necessary to provide the resources for improved environmental management. There are reasonable concerns that without the implementation of appropriate environmental policies in all countries, trade liberalisation could lead to environmental damage. This is likely to be a problem in countries where environmental legislation and policy is not a priority or well enforced. Several countries are undertaking sustainability and environmental impact assessments of trade liberalisation in order to inform future discussions and negotiations. There is no strong evidence that environmental standards are being reduced to attract foreign investment, but there is a good deal of evidence that local capacities to monitor and manage the environment are often inadequate.

¹⁹Human development report. UNDP, 1998.

²⁰Pearce, D., and others. 1996. The social costs of climate change. In *Climate Change, 1995, Economic and Social dimensions of Climate Change: Contribution of Working Group III to the Second assessment Report of the Intergovernmental Panel on Climate Change*.

2.19 In most cases, the environmental impacts of trade liberalisation are best dealt with by environmental policies. With some important exceptions, particularly the few multilateral environment agreements which provide for trade sanctions to secure enforcement, there is no provision for, and it is not desirable to use, trade measures to protect the environment. Equally, it is a mistake to argue against further liberalisation on environmental grounds. Marginalising poor countries from the benefits of global trade and investment will not prevent environmental degradation and will alienate developing countries from negotiations on global environmental issues. Rather, the challenge of globalisation is that it intensifies the need for better enforcement of appropriate environmental policies at the national level. Developing countries need to be able to harness the gains from increased trade at the same time as ensuring sound management of their environmental resources.

The causes of environmental degradation

2.20 For more than a decade, high priority has been accorded to the environment by countries for domestic policy and development assistance. But actual practice has fallen short of aspirations – opportunities for improved environmental management continue to be missed, and environmental degradation continues. Major environmental problems are rarely the result of a few large, bad projects, but rather the cumulative effects of many small decisions taken separately by millions of individuals. It is important to understand both immediate and underlying causes. The immediate cause – pollution by an inefficient factory, reduced tree cover leading to soil degradation – is generally evident and measurable. But the underlying reasons are usually a complex of social, economic and political factors. They can be categorised as market failure, unsustainable consumption, or poor and ineffective governance.

Market failure

2.21 Some of the most obvious market failures are as follows²¹:

- insecure ownership and open access to resources: this makes it unclear who has the right to benefit from a resource or who has the right to protect or pollute it. It may also lead to inadequate investment in maintaining the quality of the resource;

- externalities: when a producer can shift the effects of pollution to others, there is little incentive to limit pollution;
- uncertainty: our knowledge of many ecological processes and our effect on them is very poor and may never be reliable;
- myopia: individuals have shorter time spans than society and pursue activities whose returns are higher in the short run, but lower in the long run, than more sustainable alternatives;
- irreversibility: some kinds of ecological damage are irreversible, but many decision-making processes undervalue this loss of options.

2.22 Some environmental problems are essentially national or local in scope and solution, but their complexity still poses major challenges. For example, soil erosion has causes and effects across space, time and people. It links to water management. The actions of those upstream impose soil problems on those downstream, who cannot charge or sue those upstream for damage due to lack of property rights and clarity over fault and causality.

2.23 While many local or national problems are theoretically soluble, global environmental problems are more intractable. Individual countries lack incentives to act on global problems because they cannot capture all the rewards. Neither markets nor national laws fully reflect the value of global public goods. Only international agreements can fully protect them. But such agreements are hard to negotiate and implement for several reasons. It has to be generally accepted that inaction risks high costs and that the technology and institutional ability to find cost-effective and environmentally benign solutions to the problem exist. All parties with significant roles to play in the solution or who bear the costs of the solution must be engaged in the attempt.

The effect of patterns of consumption on the environment

2.24 On a global and national level, the poor are not usually the major cause of environmental degradation. They consume too little, contribute little to pollution and waste, and have too little access to soils, forests, fisheries and freshwater to be a major source of degradation. In some instances, however, they contribute to environmental degradation, for example, the cutting down of forests in north-western Brazil. This is generally due to a

²¹Panayotou, T, *The economics of environmental degradation: problems, causes and responses*, HIID Discussion Paper no. 355, Boston, April 1990.

combination of lack of access to land in less fragile environments, open access to these environments, population pressure and poorly designed property rights which requires land clearance to establish ownership. The solution involves tackling these issues directly.

2.25 Production for, and consumption by, the non-poor is responsible for the bulk of environmental degradation. Their consumption is not a bad thing in itself. A higher level of personal consumption is one of the main objectives of economic development. But high levels of consumption of goods and services made in ways which place intensive pressure on environmental resources can give rise to irreversible damage. The key issue is to separate consumption from the resources it requires and the pollution it generates. This can be achieved in part by technical progress. For example the amount of energy used per unit of GDP has fallen dramatically in the last 20 years.

2.30 One way to encourage both technical progress and switching by consumers to more environmentally benign products is to use correct prices, i.e. if the market failures identified in the preceding section can be remedied so that the prices of goods reflect their full economic costs of production together with their social and environmental costs²². Consumers generally reduce their consumption of goods and services whose prices increase.

2.31 While technical progress can achieve much, there still may be a volume effect if technical progress is not fast enough to keep pace with increasing demand. Thus the energy efficiency of motor vehicles may have increased significantly, but the number of vehicles owned and kilometres driven has also increased enormously. Thus the UK continues to emit almost five times as much CO₂ per capita than the developing country average – despite the UK's much higher energy efficiency.

Poor and ineffective governance

2.32 Future generations are key stakeholders in the environment, but have no voice in today's decisions. Similarly poor people often suffer from the worst environments, and also have little or no voice in decisions which affect them. The real difficulty in harnessing and protecting the environment has been to reconcile the diverse interests and demands of people alive today as well

as the next generation. Poor people's aspirations are rarely expressed as being 'environmental', but many of their problems have underlying environmental causes. Full participation in decision-making of all affected interests is generally seen as the necessary response to this dilemma. However, it is necessary but not sufficient. Stakeholder consultation can often generate tension and disagreement. It needs to be buttressed by transparent mechanisms to resolve disputes and consequently often needs to be accompanied by institutional reform.²³

2.33 Good governance can improve the lives of the world's peoples, but much government policy has been neither economically nor environmentally efficient. Where corruption subverts the public interest, both livelihoods and the environment suffer. Reforms of the last two decades around the world have brought markets back into many areas of policy and public provision, reducing subsidies and bringing prices closer to their true economic (including environmental) cost. But removal of subsidies faces stiff opposition from vested interests, often with strong political influence. The effects may also hurt the poor before improvements are seen.

2.34 Some environmental problems have been inadequately identified – so the situation has become difficult to resolve even before they have been noticed. In some cases scientific progress has allowed detection of the problem. But even then, the lack of systematic monitoring of clearly defined environmental indicators means that linkages between policies and environmental impact are not recognised. The consequences of environmental degradation are often dealt with, but with little consideration of the underlying causes. As a result, people systematically under-value the environment.

2.35 There is usually no institutional home in governments for cross-sectoral environmental concerns. It is not sufficient to establish dedicated environmental institutions or programmes. Successful action requires awareness and mainstreaming throughout government. This is very difficult to achieve and progress is slow. Most environmental ministries in developing countries have low status in the administration, are under-funded and need more skilled staff and facilities. They lack the political weight, authority and legal power to

²²It is possible. For example, Singapore has dealt decisively with the issue of traffic congestion. It can easily cost around £11,000 to obtain a permit which allows the purchase of a car. In addition, a tax is levied electronically on drivers travelling on busy roads at rush hours. The result is a rapid flow of traffic – around 60 km per hour even during rush hours.

²³For example, in relation to issues dealing with land ownership and tenancy reforms, many politicians are land owners and are reluctant to promote reform.

enforce compliance with environmental regulations or to influence other ministries. Environmental policies have often been developed in response to pressure from donors or international agreements. They have failed to capture the complexities of the pressures on environmental resources. Governments in some developing countries tend to see environmental issues, especially at the global level, as an agenda dominated by the North, and as a hindrance to economic growth.

2.36 Mainstreaming the environment into national development planning processes faces a number of other challenges including the need for transparent government frameworks; addressing the power of vested interests; developing the capacity of planning systems to incorporate environmental priorities and concerns; developing the capacity of statistical departments and economic planners to value the environment to be able to measure impacts, change and internalise environmental costs and benefits.

3. Experience to date

Experience within poor countries

Experience of the poor in achieving sustainable livelihoods

3.1 While the poor are not usually a major cause of environmental degradation, they are usually the most vulnerable to such changes. Much can therefore be learned from the way they address these problems.

A. The poor need security of access to natural resources

3.2 Weak and ill-defined security of tenure typically results in the poor being denied access to resources. This increases their vulnerability. For example, poor rural women are often more vulnerable to environmental degradation because of existing gender inequalities in access to land, and to natural and productive resources. When the poor have no ownership of a resource, there is little or no incentive for them to use it in a sustainable manner. Top-down approaches directed towards the protection and preservation of natural and physical resources, which have regarded people as part of the problem rather than part of the solution, have usually failed.

3.3 A more people-centred approach is required. Efforts have been made to promote the active involvement of local communities in the management of natural resources, with many successes. One example of combining poverty elimination and reducing environmental degradation is community forestry in Nepal.

Box 4: Access and control: Nepal-UK Community Forestry Project (NUKCFP)²⁴

The 1993 Nepal Forest Act gave legal authority to forest user groups (FUGs) to manage forest areas in the hills of Nepal. Land ownership remains vested with government but FUGs legally own the trees, develop their own management plans, set prices for forest outputs and determine how surplus income is spent. NUKCFP, covering a sixth of all hill districts, has supported capacity-building to implement this legislation within the Forestry Department, non-governmental organisations (NGOs) and FUGs. Surveys show that forest quality is improving in nearly all forest areas under FUG management, although it is still deteriorating in all other forest areas as pressure transfers from the protected to the unprotected forest. Gains for the poorest include greater access to forest resources, although if the FUG is dominated by local elites, the poor can still lose out.

3.4 Experience has not always been positive. Not all stakeholders have compatible objectives and there are different degrees of power and influence. This can lead to conflicts over the use of shared resources or when certain groups are left out of the decision-making process. Inward migration also brings problems for community management as outsiders contest access to resources. Much remains to be learned about the key issues which underpin the effectiveness and equity of community-based management structures. In many instances, it has proved difficult for communities to self-regulate resources, without the involvement of other independent stakeholders, such as non-governmental organisations or government authorities.

²⁴Community forestry in Nepal: impacts on common property resource management, Springate-Baginski O et al, 1998; Changes in community forestry conditions and management 1994-98: analysis of information for the forest resource assessment study and socio-economic study of the Koshi hills, Branney P and Yadav K (1998).

Box 5: Community-managed wells in Mali²⁵

The Macina wells project was a response to the Sahelian drought of 1984–1985. Its aim was to improve and extend water and sanitation provision through construction of wells and public health education. A community management approach was adopted, involving the allocation of tasks to water management teams. The gender division of responsibilities within the project was such that older men with authority were appointed as well caretakers and women as cleaners. Women were also given minimal influence over project planning and excluded from technical aspects of the project and decision-making responsibilities.

The result was that both men's and women's work was substandard. The caretakers were seldom on site and well maintenance was poor. Women tried to avoid well cleaning which they saw as an added burden. They were also unwilling to co-operate with the rules set by the men, which they thought impractical and illogical. Men lacked any incentive to undertake their work since water provisioning and sanitation were viewed as 'women's work'.

B. The poor are readier than might be expected to contribute to environmental services

3.5 The success or failure of programmes to improve the provision of environmental services (such as water supply, sanitation and waste management) depends on consumer demand. In some cases, this means seeing what the poor are doing already and then supporting them. The poor are willing and able to pay for a service they value and need.

Box 6: Improving waste management services in Egypt²⁶

In many rural and urban areas of Egypt there is little effective waste management, and refuse piles up in streets causing health hazards and impeding access. The poor in Egypt consistently identify waste management as one of their major environmental priorities. Discussions with the urban poor living in Sohag in southern Egypt revealed the price they would be willing to pay for improved waste services. Through working with existing community-based organisations and groups, low-cost waste collection, transfer and disposal services were developed in a pilot district in Sohag. The provision of these services significantly improved waste collection, with benefits for over 100,000 people. Due to popular demand, the improved waste collection services were extended to other districts on a cost recovery basis.

3.6 However, consumers are often unwilling or unable to meet the full cost of a service. For example, while people are willing to pay a market price for the provision of drinking water, they are often unwilling to pay for wastewater treatment. Private companies are therefore willing to extend piped water supplies because the costs can be recovered, but will not provide sanitation. Yet increasing water supply without treating and disposing of wastewater can exacerbate environmental health problems. Part of the answer lies in better health education. It is usually important to ensure that the poor pay for at least the operating cost of the service, to ensure financial sustainability. However, there may be a case for subsidising part of the capital investment consistent with other calls on the government's budget.

C. The poor should be helped to improve existing livelihoods

3.7 It is important to help the poor improve the sustainability of their existing livelihoods, rather than encouraging them to adopt completely new practices, unless this is the only practicable alternative. Sustainable poverty reduction is achievable only if external support focuses on what matters to people's lives, understands the differences between people and works with them in a way that is consistent with their current livelihood strategies,

²⁵ *Integrating gender into environment research and policy*, Joeekes et al, IDS Working Paper 27, Brighton, 1996.

²⁶ *Support to environmental assessment and management – Phase II*, DFID.

social environments and their own ability to adapt. Box 7 shows an approach that has been successful, while Box 8 illustrates some of the difficulties.

Box 7: Prunus harvesting on Mount Cameroon²⁷

People living on Mount Cameroon depend for their livelihoods on the use of forest resources. The forests on Mount Cameroon are some of the most biologically rich in Africa. One of the key environmental threats on Mount Cameroon was the unsustainable exploitation of the tree *Prunus Africana*, (the bark of which is used as the source of products to treat prostate gland disorders). The high level of extraction by several hundred harvesters threatened to destroy the trees and reduced the price for which the bark could be sold to an international pharmaceuticals firm. Initially the project tried to identify alternative livelihoods for the harvesters, but this approach failed. The project then assisted the local community to establish a *Prunus* Harvesters' Union. In its first year of operation, the union tripled annual revenues to US\$40,000 from the collection of *Prunus* bark sold to the pharmaceutical company Plantecam. Of this, about US\$36,000 was distributed among the 60 involved harvesters on a pro-rata basis according to the amount they individually harvested, and US\$2,500 was used to install the community's first pipe-borne water supply. The pharmaceutical company now purchases bark directly from the Union, which has an incentive to harvest the bark sustainably.

Box 8: Livelihoods and sustainability in coastal Kerala²⁸

Fluctuations in fish stocks, intensification of fishing as well as changes in fishing methods have led to concerns about the sustainability of the coastal environment and the livelihoods of fishing communities in Kerala, India. Environmental health issues are also a major problem in the densely populated villages of coastal fishing communities. Attempts to reform the fisheries sector to strengthen livelihoods have centred on the at-sea activities of men, with loans, extension and new technology aimed at small-scale fishermen. Women's involvement in environmental concerns has largely been viewed in terms of their reproductive activities within the villages. The activities of women fish-traders selling at local markets have gained less attention. Yet the women's incomes are adversely affected by the diminishing quantity and quality of fish available for them to sell as a result of overfishing. The women's interests in environmental sustainability are closely linked with their trading activities, even though they are not directly involved with catching fish.

D. Livelihoods can be improved by linking sustainable use and conservation of biodiversity

3.8 Preventing biodiversity loss helps increase the resilience and productivity of ecosystems over a range of environmental conditions. This underpins the security of livelihoods of poor people who rely on natural resources. However, conservation through the rigid enforcement of protected areas has often proved ineffective in preventing the loss of biodiversity. Poor local communities denied access to such areas have little incentive to support protected area regulations or employ their local knowledge of the conservation and sustainable use of biodiversity. Common problems are illegal harvesting, poaching or encroachment in the conservation area itself and increased degradation of resources in the surrounding areas. The development of community-based management systems, which involve the active participation of local people, has tried to ensure that they benefit more directly from the conservation of biodiversity. Two DFID projects in Tanzania are addressing natural resource management

²⁷ *Participatory biodiversity conservation – rethinking the strategy in low tourist potential areas of tropical Africa*, Brown 1998; *Prunus Africana: striving for sustainable and equitable resource management in Cameroon*, Acworth J and Ewusi. B (1999).

²⁸ *Globalisation and fishing livelihoods in South Asia*, Hodges, N. Unpublished dissertation, 1999, IDS, Brighton.

issues through institutional change to reduce poverty. One at Mbomipa has established an effective wildlife and natural resource management system under community control. The other has developed local capacity to manage the Usangu wetland by reducing conflicts over aquatic resources, improving overall water use efficiency and reducing threats to the bio-diversity upon which livelihoods are dependent.

E. Controls are needed on environmentally damaging activities by the non-poor

3.9 The poor may be powerless to prevent damaging activities by the non-poor. For example, small-scale coastal fisheries are often destroyed by large trawlers, or locally organised forest users may be undermined by illegal commercial loggers. The poor may be forced on to marginal lands if most land is controlled by large farms, as in Central America and some parts of Africa. It is often impossible to help the poor tackle the degradation of their environmental resource base without considering the impacts of the non-poor. Efforts that are focused solely upon assisting the poor may, therefore, fail to improve the management of the environment.

3.10 International efforts can help. The International Code of Conduct for Responsible Fisheries is a voluntary code, developed and promoted by the FAO, which sets out principles and international standards of behaviour to ensure effective and equitable conservation, management and development of aquatic resources. The Code has been agreed by all member states of the FAO and has an important contribution to make to the development of policy for sustainable fisheries. DFID is providing £24 million to a number of West African countries over the next five years in support of the Code.

3.11 Political support to address these inequalities is often necessary. This can be illustrated by the co-operation between government and local communities to stop environmental degradation. However, while governments may introduce new environmental laws and regulations that protect the interests of the poor, implementation and enforcement is variable and frequently low.

Box 9: Stopping environmentally damaging activities by the non-poor in Sri Lanka

The RITICOE project in Sri Lanka sought to protect biodiversity in the important natural sanctuary of Rittigala and increase livelihoods for households near the sanctuary. Collective management initiatives were started by the local Buddhist priest to limit open access to the forest and medicinal plants. However, while these had some success, it soon became clear that most of the illegal logging was being done by non-poor 'outsiders', which the local households were powerless to stop. With donor assistance, links between the neighbouring villages and the Department of Wildlife were developed so that the villagers were able to inform the Department of Wildlife to enable it to take action against illegal logging.

Civil society experience

A. Civil society can be an effective lobby ...

3.12 Civil society has been a powerful voice in the developed world for raising awareness of environmental issues and campaigning for action to address them. Non-governmental organisations (NGOs) in developing countries have taken the lead within civil society on the environment. While there has been a large growth in the number of environmental NGOs in poorer countries, their impact to date has often been localised and their memberships quite small. In the past, many international NGOs regarded the poor as the cause of environmental degradation, rather than an integral part of the solution. However, this is now changing.

3.13 NGOs have other strengths such as the formation of partnerships for cost-effective delivery of services, particularly to the poor; raising awareness through support for effective environmental education programmes in both formal and non-formal education; forming international alliances; and building political will. This last strength is particularly important, since gains from resource extraction often accrue to a few powerful companies or individuals, while the benefits of environmental protection are dispersed among large numbers of people.

3.14 It is important that NGOs show the responsibility to go with their new-found power. They need to pick the right issues, to represent the facts accurately, be responsible to international civil societies and to the real needs of poor countries.

B ... and can raise environmental awareness more generally

3.15 Civil society groups have been particularly effective in raising environmental awareness and holding government and the private sector accountable for environmental improvements. The media in many developing countries (for example, Thailand and the Philippines) have been active in publicising environmental damage, often caused by state institutions. Interest groups have formed to monitor government and corporations and have lobbied for change when performance is below the expected environmental standards. In India, the Supreme Court became involved in monitoring progress towards environmental improvement following protests by public interest groups. In Indonesia, the state environmental agency allocated a mark to large industries based on their environmental performance. Community groups then put pressure on the worst polluters to improve²⁹.

Governmental experience

3.16 Governments in countries throughout the world have taken actions to enhance the quality of the environment in a number of different ways. The following sections summarise the key lessons learned from actions taken by governments in poor countries to address environmental degradation.

A. Clear administrative responsibilities are needed

3.17 Arrangements for managing the environment are often confused, with responsibilities shared between various government ministries or agencies. While there is no clear blueprint for institutional reform, many countries have been improving their institutional and legal framework. One strategy has been to focus on a resource-based approach with a new legal framework created to encourage participation, a holistic view of the resource and clearer property rights. For example, the 1992 National Water Act in Mexico enshrines the principles of decentralisation, user participation, and the introduction of private concessions. New institutions have also been established to manage particular resources. Indonesia has established new river basin authorities to manage watersheds, and a number of other countries are setting up water councils to handle issues of water allocation.

3.18 Many countries have recently created or strengthened environmental ministries or agencies, which

are principally responsible for multilateral environment agreements, for drafting and enforcing national environmental laws and regulations, and for contributing to the development planning process – usually through managing environmental impact assessments. However, the effectiveness of the majority of environmental ministries or agencies remains limited. It is thus important to ensure that older, more powerful ministries are also strengthened to handle environmental concerns.

3.19 Typically, other government authorities have environmental responsibilities within their overall mandate. Often these responsibilities can result in conflicts between their efforts to promote productive activities, and to ensure that such production is sustainable in the longer term. For example, fishery agencies are responsible for both increasing fish production and protecting fish stocks. In those instances where institutions share responsibilities for both production and self-regulation, it is the latter function which is usually weak, under-resourced and often poorly implemented.

3.20 Decentralisation is occurring in a number of developing countries, especially in Africa and Latin America. It has had a varying impact on environmental management. Typically, the transfer of environmental responsibilities to districts and municipalities has occurred without a concurrent transfer in resources or powers. For it to be effective, there is a need for environmental management to be devolved to the lowest appropriate level and for communities to be empowered to manage the resources on which they rely.

B. Environmental policies and plans can be useful but only if certain criteria are met

3.21 The majority of governments in poorer countries have environmental policies and plans. However, their preparation was frequently donor initiated. In the early 1990s, the World Conservation Union promoted the preparation of national conservation strategies in a number of countries. At the same time, the World Bank supported the preparation of national environmental action plans (in many countries (including a number which had, or were preparing conservation strategies). There has been much debate about their effectiveness and impact. While many strategies and plans have not led to different approaches, a number have been influential.

²⁹The PROPER programme began in early 1995 in Indonesia – the acronym standing for Programme for Pollution Control, Evaluation and Rating.

Box 10: Some benefits of national and provincial environmental strategies³⁰

Botswana The National Conservation Strategy (NCS) led to the establishment of a National Conservation Strategy Advisory Board and Co-ordination Agency. Environmental impact assessment procedures were introduced into national planning and development. Application of these procedures had a major impact on development decisions.

Nepal The NCS led to the creation of an inter-sectoral network of senior governmental officials from 20 ministries and departments. This group acted as a catalyst for introducing environmental assessment procedures, and the establishment of environmental units within key government sectors.

Nicaragua A highly participatory process was used to prepare the NCS. This contributed to the national dialogue between antagonists in the recent civil war and launched locally-led efforts to tackle environmental problems affecting the poor.

Azerbaijan The National Environmental Action Plan (NEAP) was the first document to quantify the scale of environmental degradation and to prioritise actions needed. In response to the NEAP, the Government took a loan to fund the Urgent Environmental Improvement Programme, which addressed clean-up actions and institutional strengthening and reform.

3.22 Key lessons to emerge from these strategies and plans are that:

- there needs to be genuine local demand;
- preparation should be led by people with a role in national development (rather than by environmental institutions);
- high-level political support is required;
- active participation by all stakeholder groups is critical (rather than a top-down, or science-based, process);
- consideration is given to the most effective means for integrating economic, social and environmental objectives; and
- stakeholders should monitor the implementation of the strategies.

C. Environmental laws and regulations should be made more relevant and effective

3.23 The introduction of pollution-related environmental laws and regulations is relatively recent, even in many developed countries. Many of the environmental laws and regulations in place in developing countries were based on a 'command-and-control' approach. Often these have not been implemented effectively, as government institutions lacked the powers and resources to enforce them. In addition, they frequently did not take account of the views and rights of other stakeholders, in particular the poor.

3.24 Many poor countries have introduced legislation requiring environmental impact assessments for projects. As in developed countries, this process is of varying effectiveness and impact. Key factors influencing success are that assessments should be conducted at an early stage in project design; those affected must be consulted; the assessment must form part of a wider development planning and decision-making process; they must be available for public scrutiny; and there should be an independent and objective evaluation of the quality of the assessments.

D. Broader economic policies are very important

3.25 Economic policies, such as taxation, public expenditure and trade policy can have a profound effect on the way resources are used. In order to convince economic policy-makers that these issues are worth addressing, there is considerable effort being devoted to quantify the economic costs of environmental damage both at a specific level, such as the cost of air pollution to a city, and at the aggregate level, for example by adjusting estimates of GDP to reflect environmental damage. The results are often stark, suggesting that for many countries the GDP may be significantly over-stated when environmental damage is taken into account. Two examples for China³¹ and Pakistan³² illustrate this point.

- *"The damages of excessive pollution – in the form of premature deaths, sickness and damage to productive resources and urban infrastructure – are estimated to cost the Chinese about 8% of GDP."*
- *"The social cost of environmental degradation in Pakistan is likely to be enormous and will continue to increase."*

³⁰Strategies for national sustainable development: a handbook for their planning and implementation, 1994, J Carew Reid et al.

³¹China 2020: Clear water, blue skies, IBRD, 1997.

³²Pakistan national conservation strategy: review of the commitment to action, Mid-term Review, June 2000.

The direct health and productivity impacts have been conservatively estimated at US\$1.5 – \$3 billion annually, or 2.3%–4.6% GDP, almost half of which are attributable to water pollution. This cost is almost doubled if the impact of indoor air pollution is included”.

3.26 Although these figures are significant, they need to be treated with caution. For example, in the case of China, it does not mean that GDP would necessarily be 8% higher if China solved its environmental problems, since China would need to invest substantial sums of money to deal with these problems. But it does suggest that there should, in principle, be a high rate of return for programmes which deal with pollution control and so on. Nevertheless, the figures send an important message to policy-makers and are a good rationale for the use of public expenditures for environmental improvements.

3.27 Given the administrative weaknesses of many environment ministries, it has generally proved more effective to rely on market-based instruments to ameliorate adverse environmental trends. However, there is a perception that some of these instruments, particularly the removal of subsidies, have a negative impact on the poor. This perception is often wrong. In most cases, such subsidies are both harmful to the environment and mainly benefit the non-poor. For example, subsidies that reduce the price of fossil fuels encourage their use and the accompanying emissions of greenhouse gases, and subsidies that keep water prices low for large-scale farms encourage over-irrigation and depletion of freshwater supplies. Most of these subsidies particularly benefit the non-poor. By contrast, the poor often have no access to subsidised systems of water, sewerage and waste collection. Where a genuine case can be made that the poor will be negatively affected, a general subsidy can be replaced by a targeted one which helps the poor with much less environmental damage.

3.28 Many developing countries are now addressing the problems of under-pricing environmental goods. Countries are beginning to revise subsidies for fossil fuels (which cause local air pollution and global warming), fishing gear (over-fishing), diesel (particulate air pollution), pesticides (increased pesticide poisoning and water pollution) and land conversion (leading to forest loss).

Box 11: Energy subsidy reform in China³³

China has made remarkable progress since the 1980s in reducing fossil fuel subsidies. Subsidy rates for coal, which accounts for 73% of China's commercial needs, fell from 61% in 1984 to 11% in 1995. As a result, energy intensity in China – once among the highest in the world – has fallen by about 30 percentage points since 1985. This has also had a major impact on China's greenhouse gas emissions, which by 2020 will have fallen by an amount equivalent to emissions from a year's energy consumption. Efficiency gains in industry, resulting from structural and technical changes, have also played a major part in reducing the energy intensity of the economy. China removed price controls on coal, and encouraged the development of private coal mines, which now produce around 50% of China's coal. Subsidy reform and industrial restructuring has produced multiple benefits: financial savings, energy savings and reduced emissions.

3.29 Many natural resources have a value which can be taxed by the government while still allowing for profitable exploitation. The lower the tax, the greater the incentives for unsustainable exploitation. Many developing countries have low taxes for natural resources such as forestry, fisheries and other mineral deposits. Some are now raising them. For example, the Forum Fishery Agency in the Pacific has significantly increased the charges for entry to their fisheries zones for foreign fleets. Timber concessions have been auctioned to the private sector. Another important resource within developing countries are natural parks. Many countries are raising entrance fees charged to foreign tourists. This can provide funds for biodiversity management and compensation for those who live around the park.

3.30 While most countries have traditionally focused on a regulatory approach to environmental compliance, a growing number are now shifting to environmental taxes and charges. In Malaysia, a tax on wastewater discharge led to major reductions in water pollution. China, Russia and Central and Eastern Europe all have elaborate systems of pollution fees. State ownership of industry previously meant the fines had little impact but with privatisation, a simplified and higher level of fees has led to significant environmental gains. Partial and targeted rewards and incentives can also be an important way to change

³³Wang, X (1996), *China's coal sector: moving to a market economy*, World Bank, China and Mongolia Department, Infrastructure Division.

behaviour. Examples include renewable energy, watershed protection and cleaner production technology.

3.31 While environmental charges have many advantages, they have not always been successful. The lessons learned from past experience are:

- be realistic and keep implementation of policies within available institutional capacity;
- be gradual and pilot approaches first;
- allow for the possibility of low cost revisions when drafting legislation;
- relevant stakeholders must be involved, particularly to overcome concerns about effects on equity and industrial costs;
- rely on markets – low cost administration is vital.

E. Research and technology can help but is no panacea

3.32 Land degradation is particularly acute in arid and semi-arid lands, leading to marked decreases in soil fertility. There are many successful examples of resource-conserving technologies increasing or maintaining productivity in marginal lands and reversing degradation. They include soil and water conservation, reduced tillage, trickle irrigation, composting, inter-cropping and improved rotations. In Machakos district in Kenya, soil degradation and erosion were successfully reversed and productivity substantially increased by a combination of bench terracing, tree planting, diversification and the integration of crop and livestock production. Experience indicates that:

- technology alone is not enough, it needs to be supported by vigorous local institutions and an enabling external environment;
- some techniques need action and adoption at community level;
- single technologies are likely to have limited impact while combinations are more successful;
- farmers need incentives to adopt a long-term perspective – especially secure access to land and other resources.

3.33 An increasing proportion of research into biotechnology is being undertaken by the commercial sector. It can be useful and of high quality but it is largely aimed at bigger farmers and profitable cash crops. There are possibilities for using genetic modification technologies

to benefit poorer farmers, but research is at a very early stage. For example, it can be applied to crops like cassava to produce increased resistance to disease and pests. Half the world's population eats rice daily; yet rice is a poor source of essential nutrients. Using these technologies, a new variety of rice has been produced with a high content of vitamin A³⁴. Such investments may not be commercially attractive to seed companies. There is, therefore, a case for more public funding of research directed towards poor farmers.

3.34 Integrated pest management encourages natural control of pest populations by anticipating problems and preventing them from reaching economically damaging levels. A range of techniques is used such as increasing natural predators, planting pest resistant crops, adapting cultural practices and, as a last resort, using pesticides judiciously and selectively. It has produced good results in Brazil, China, Indonesia and India, reducing pesticide use by up to 90%.

3.35 Successful technology transfer and adoption depends crucially on knowledge and understanding of how best to use it. The way knowledge is spread is a critical factor. Lessons from the agriculture sector indicate that top-down, package approaches are unsuitable and ineffective for poor smallholder farmers, and that the adoption of inappropriate technology can undermine sustainable livelihoods. Approaches which support a learning environment among farmers, providing technology choices and information, encouraging and supporting farmer experimentation and encouraging farmer-to-farmer exchanges and visits, are much more effective than the more prescriptive, old-fashioned extension methods.

Private sector experience

A. Increasing corporate responsibility offers environmental opportunities to business, not just costs

3.36 In recent years, businesses have increasingly recognised that improved environmental performance is a financial opportunity rather than just an extra cost.³⁵ Cleaner production methods were pioneered in the UK. They aim to eliminate pollution at source and conserve raw materials such as energy and water. This proactive, preventative approach contrasts sharply with traditional

³⁴In South-East Asia, 70% of children under the age of five suffer from vitamin A deficiency, leading to blindness and other diseases. UNICEF predicts that improved sources of vitamin A could prevent up to two million deaths a year for children under four years of age.

³⁵The share prices of the top 50% eco-efficiency companies in the global chemicals sector have out-performed the bottom 50% by 20% over the last two years, Environment Finance, June 2000.

pollution control or waste management, which aims to mitigate damage after it occurs. Moreover, cleaner production is also often much cheaper. Growing corporate responsibility has led to the introduction of environmental management systems, the setting of clear targets, and the publication of annual environmental audits. However, in the small and medium enterprise sector, progress is much slower.

3.37 In general, foreign direct investment in developing countries has led to an overall improvement in the environmental performance of enterprises. Most multinational companies now promote the application of international environmental standards, and, through investment and management changes, are able to introduce new technology to reduce pollution and emissions. The initial concern that varying environmental standards in different countries would lead to pollution havens has now largely been allayed (although there have been one or two examples identified in research, e.g. the tanning industry in Brazil and phosphate manufacturing in North Africa).³⁶

B. The Clean Development Mechanism offers significant opportunities for the private sector to support sustainable development

3.38 In 1997, the Kyoto Protocol set out commitments for developed countries to reduce their emissions of greenhouse gases. The Protocol also established three mechanisms to help countries meet these targets. Of these, only the Clean Development Mechanism involves developing countries directly. It has two aims: to assist developing countries in achieving sustainable development while simultaneously assisting developed countries in meeting their emission reduction commitments.

3.39 Under the Clean Development Mechanism, a developed country investor would invest in projects in developing countries in return for carbon credits. Such credits could then be used by developed countries towards meeting their Kyoto commitments. It should benefit both developed and developing country partners.³⁷ The developing country gains from the transfer of new environmentally-sound technologies and increased levels of foreign investment. All projects will also need to contribute to sustainable development in the host developing country. A share of the proceeds will help fund adaptation to climate change in the most vulnerable countries. Many countries will also benefit from various capacity-building initiatives, designed to enhance their ability to attract climate-friendly investment.

Box 12: Private sector activity on sustainable development

Many companies are examining how sustainable development approaches can be incorporated into their activities. They recognise the increased transaction costs and public relations damage incurred through poor environmental and social management. This is now coupled with demands for increased corporate responsibility and greater awareness of the business opportunities associated with better environmental and social performance. As a result, the private sector is demonstrating some advanced and leading thinking in the field of sustainable development. Most recently, new rules introduced into the UK in July 2000 require pension funds to declare the extent to which social, environmental or ethical considerations are taken into account in the selection of stocks by fund managers.

Certain companies are now actively attempting to mainstream sustainable development into their corporate policy and thinking. Wider initiatives on issues such as biodiversity, public health, sustainable energy, and climate change are being supported. Emphasis is placed on underpinning all company activity with much greater engagement with public authorities, NGOs and communities. However, discrepancies between corporate intentions on the environment and sustainable development and actual operational activities are recognised as a significant problem. This parallels the problem experienced in many donor organisations of a gap between policy commitments to the environment and what is actually delivered through programme activities.

There is considerable scope for donor institutions and government departments to share experience, and to strengthen collaboration, with the private sector. The opportunity exists to develop coherent and compatible approaches to achieving sustainable development. The World Business Council for Sustainable Development and the World Bank Business Partners for Development are two such examples.

³⁶Mabey, N & McNally, R, *Foreign direct investment and the environment: from pollution havens to sustainable development*, WWF-UK.

³⁷A World Resources Institute assessment of the potential for CDM projects in Brazil, China and India suggests a wide range of sustainable development benefits, including cleaner air and water, reduced deforestation, soil conservation, and biodiversity conservation; and social benefits such as rural development, employment and poverty alleviation.

Experience within bilateral and international institutions

Bilateral institutions

3.40 Virtually all development organisations cover the environment in their normal operations. In the last decade, most have introduced environmental screening and increased the numbers of environmental staff. However, whilst improved screening and appraisal techniques have meant that few projects cause direct environmental harm, development agencies have been less successful at integrating environmental opportunities into their work.

3.41 These shortcomings have been as apparent in DFID's programmes as in those of any other donor. An environment evaluation synthesis report for DFID³⁸ concludes that: *"DFID has accorded high priority to the environment for over a decade ... There is a gap between the high policy priority attached by DFID to environmental issues, the value of projects marked as having environmental objectives, and what has actually been delivered in terms of positive environmental impact. Environment as a potential development opportunity – rather than as a risk to be minimised and mitigated – has not been fully mainstreamed across the bilateral programme"*.

3.42 The report identifies four key challenges:

- demonstrate the contribution of environmental improvement to direct poverty reduction;
- fully integrate the environment within bilateral strategies;
- design monitorable performance targets for the environment at country programme and DFID level;
- have a central department with the mandate to promote and support the environment as integral to poverty elimination, and with responsibility for monitoring environmental performance.

3.43 DFID's response to these challenges is set out in section 5. They are common to the international community, including other donors and governments. There is great potential to build on these commonalities through consultation and mutual lesson learning. The World Bank is carrying out a comprehensive evaluation of their environmental activities. A recent history³⁹ states that while the Bank has *"promoted itself as a champion of environmental sustainability ... the integration of these new concerns has been severely constrained by the Bank's established*

organisation, incentives and knowledge". DFID is co-operating closely with the World Bank in this evaluation and in the formulation of its new strategy.

Multilateral institutions

3.44 The UN has played a leading role in the global environmental agenda, not least by organising the 1972 Stockholm Conference on the Environment and the 1992 Rio Earth Summit. Of the UN institutions, the UN Environment Programme (UNEP), based in Nairobi, is designed to be the intellectual and technical leader for global environmental protection. It has in-house expertise and its annual report on the state of the global environment is well regarded. But overall it has very limited funding, variable staff quality and an unfocused mandate, all of which have led to a lack of confidence in UNEP by the international community. Attempts are now being made to address these issues and reform the work of the institution and its governance. Habitat, the operational arm of the UN Centre for Human Settlements is responsible for the implementation of the Habitat Agenda (sustainable human settlements and adequate shelter for all). It needs to take steps to improve the assessment of its real impact and to improve links with civil society, but it has the potential, with UNEP and the UN Development Programme (UNDP), to integrate environmental concerns in the planning and development of human settlements.

3.45 After Rio, the Commission on Sustainable Development was established as the dedicated body to monitor progress in protecting the global environment. It has developed a clear work programme and has successfully involved NGOs and the private sector. But it has faced resistance from vested interests in the UN, it has poor links with the international financial institutions and has no power to impose binding obligations on countries, since its mandate is simply to review progress towards the implementation of Agenda 21. However, it remains an important voice in monitoring the implementation of the follow-up to the Rio conference; and its structure does allow countries to engage in a free and transparent debate if they choose to take the opportunity offered.

3.46 The role of other UN programmes and agencies in support of the environment has been variable, but generally insubstantial, even though many have increasingly

³⁸*Environmental Evaluation Synthesis Study: Environment: mainstreamed or sidelined*, Michael Flint, Paul Balogun, Anne Gordon, Richard Hoare, Ben Voysey, Anthony Ziegler, June 1999.

³⁹*Greening the Bank: The struggle over the environment, 1970-1995*, Robert Wade, in *The World Bank, its first half century*, Kapur, Lewis, Webb (eds) Brookings Institution Press, 1997.

integrated environmental concerns into their strategic objectives. The inefficiencies associated with the UN have hindered a coherent approach to environmental problems, with core agency mandates, rather than cross-sectoral approaches, remaining at the heart of their work. For example, although the UNDP has a very strong field presence, a clear mandate as UN co-ordinator and good relations with many developing countries, it has been unclear about its practical role in support of the environment and, like other agencies, its integration of environmental concerns has been weak. The UNDP is now trying to strengthen its role in support of governance and capacity issues and to take a leadership role in establishing links between the environment and poverty reduction. DFID will seek to support and build on this work.

3.47 The UN's environmental institutions entered the development scene relatively late compared to well-established specialised agencies such as the WHO or the FAO. They have, therefore, had to fit within already established institutional relationships and there has been little real integration of environmental concerns into the broader UN system. However, a start has been made with the establishment by the Secretary General in October 1999 of an Environmental Management Group under the chairmanship of the Executive Director of UNEP. Its purpose will be to enhance inter-agency co-ordination in the field of environment and human settlements within the UN. It is important that there should be greater co-ordination and integration of environmental issues in other international bodies. The Environmental Management Group can help in this effort. Such incremental changes are likely to be more effective than more radical organisational change such as the establishment of a World Environment Organisation.

3.48 The World Bank remains a very significant channel for resources for sustainable development in developing countries. It has shown a strong interest in the global environment debate and has wide experience of environmental issues in developing countries. With its skills in policy analysis and strong links with central ministries, it can wield major influence upstream on the policies of developing countries in support of the environment. Many of the institutional and economic reforms identified earlier in this section are now being addressed with World Bank funding. It has also helped research the link between economic policy and the

environment. It is currently working on a new environmental strategy and sustainable development will form the focus for the 2002 World Development Report. Nevertheless, the environment remains less influential than other sectors and can often lose out to economic and social objectives (for example, in the integration of the environment into Poverty Reduction Strategies). The regional development banks face similar problems, and they probably lag behind the World Bank in integrating the environment into their programmes.

3.49 The EU is committed to integrating the environment into its policies and programmes and investigating the links between poverty and the environment. With its significant funds for development, it is an important partner in pursuing the environment target. Whilst on paper the EC's environmental screening and appraisal systems are excellent, a 1997 evaluation of the effectiveness of environmental integration concluded that much remained to be done⁴⁰. There is now a stronger political momentum behind integration efforts. The importance of integration and plans to strengthen it were endorsed at the Development Council in November 1999. The plans include greater emphasis and increased dialogue with partner countries on environmental issues, enhanced capacity for environmental management in developing countries, the integration of environment and sustainable development considerations in the next trade round, and increasing the ability of partner countries to participate effectively in international environmental negotiations. However, translating these plans into consistent actions remains a major challenge.

3.50 Two other international organisations are also relevant: the International Monetary Fund (IMF) and the World Trade Organisation (WTO). The IMF tries to promote better economic management through its activities in designing stabilisation and structural adjustment programmes. However, whilst there is evidence that some aspects of economic adjustment, such as the removal of subsidies, have been environmentally beneficial, other aspects such as cuts in public expenditure may have been detrimental. The IMF has recently established a small in-house environmental unit. It will act as a liaison point in particular with the International Bank for Reconstruction and Development (IBRD) to ensure co-ordination between the two institutions. The WTO has had to respond to concerns that trade may have adverse effects on the environment (for example, by clarifying its position on

⁴⁰Evaluation of the environmental performance of EC programmes in developing countries: a synthesis report, ERM, 1997.

labelling). It has done so in such way as to resist pressure for eco-protectionism. It should also recognise that multilateral rules on trade and trade measures in environmental agreements are compatible.

Global environmental institutions

3.51 Trans-boundary environmental problems are starting to be addressed through an increasing range of international and global institutions, such as the UN Conventions on climate change, biodiversity and desertification. They help to raise the profile of specific global environmental problems, particularly at a high political level. But this politicisation can make their outputs remote from day-to-day problems in developing countries. In general, developing countries resist binding targets during negotiations, since they see global environmental problems as caused principally by the North and are suspicious that their economic growth might be restricted. Developed countries face major changes to established lifestyles and fear environmental measures will make them less competitive in world markets. At present, this tends to result in 'lowest common denominator' decisions.

3.52 The Montreal Protocol has been successful in slowing down depletion of the ozone layer. It is expected that depletion will soon start to be reversed. This is largely due to the phasing out of CFCs and halons in developed countries and the wide availability of replacement technologies. The Kyoto Protocol to the UN Framework Climate Convention has negotiated legally binding measures on developed countries to protect the environment. A major challenge is to ensure the Protocol is brought into force.

3.53 An example of global approaches has been the establishment of the Global Environment Facility (GEF). It assists developing countries in meeting the additional cost to them of addressing global environmental objectives. Projects addressing climate change, biological diversity, sustainable management of international waters and ozone depletion are implemented by the World Bank, UNDP and UNEP. It has unrivalled experience in practical approaches to global environmental problems and a wide network of scientific advisers. Finance through the GEF has been substantial (about \$3 billion has been committed since 1991) but it is viewed rather suspiciously by developing countries, since disbursement has been slow. Some see it as driven by the North's environmental agenda, and although finance for the GEF was an additional commitment after Rio, it has been overshadowed, from the perspective of developing countries, by more general failures to make progress towards the 0.7% of GNP target for aid. The GEF also promotes the mainstreaming of the global environment into the programmes of other institutions. Negotiations for a third replenishment of it will commence in late 2000, with completion of the process expected in early 2002. A successful outcome to the replenishment is likely to be welcomed by developing countries and encourage more constructive North-South partnerships at Rio+10.

4. Meeting the challenge

4.1 A number of environmental principles have become accepted as the basis for action and the assessment of risk. They provide a framework in which to set proposals to meet the challenges set out in earlier sections of this paper. The most common principles are shown below.

Box 12: Environmental principles

Internationally accepted environmental principles include:

The **precautionary principle**: accepted in Principle 15 of the 1992 Rio declaration and also included in the Maastricht treaty – “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 damage”. Used most notably in the Montreal Protocol to reverse the depletion in the ozone layer, the precautionary principle embodies the concept of proportionality, so that dealing with environmental problems should not be disproportionately costly. It has most recently been incorporated in the Cartagena Protocol on Biosafety.

The **polluter pays principle**: external effects should be ‘internalised’ into an individual or firm’s decision-making, such that the polluter bears the cost of pollution and so has an incentive not to pollute.

The **preventative principle**: the basis of action should be prevention and reduction of pollution not ‘end of pipe’ or remedial action.

Common but differentiated responsibility is strongly advocated by developing countries in environmental conventions. It asserts that all countries share responsibility for addressing global environmental issues, but some (i.e. developing countries) should share a lesser burden because they have contributed less to the problem, and because of their legitimate right to economic growth and sustainable development.

4.3 Strategic planning processes, whatever their construct or label, which are committed to and adhere to the principles of sustainable development will at least ensure progress towards the achievement of sustainable development. Reductions in poverty may prove ephemeral if this does not happen.

4.4 An effective response to the International Development Target can be structured around the following priority categories of work.

Reducing poverty by tackling environmental degradation

4.5 Environmental issues are part of a wider set of factors which contribute to making people poor. Earlier sections have demonstrated that there are many real opportunities for reducing poverty and, at the same time, protecting and improving the environment. There are a

4.2 Throughout this paper possible actions have been looked at primarily from a poor country perspective. There are many existing strategies and plans which embody certain aspects of sustainable development – but many have missing components, are implemented poorly and monitored inadequately. Most macro-planning has tended to place inadequate emphasis on poverty reduction and environmental protection. Many environmental plans have failed to adequately consider economic and poverty issues.

number of practical actions that the international community can take. These actions have been recognised and summarised by the UNDP and European Community (EC) Poverty and Environment Initiative:⁴²

- **Strengthen participation by the poor in decision-making related to access to environmental resources** and services through facilitating participation by the poor in the preparation and implementation of national and local plans, policies and strategies.
- **Protect the current natural asset base of the poor** through protecting the access the poor already have to critical resources (such as entitlements to land, water, trees, pastures, fishing grounds) – especially in cases where the poor are in a weak position to resist appropriation of these resources by other groups, and through protecting the environmental resources upon which the poor depend for their livelihoods.

Box 13: National strategy for sustainable development (nssd) principles and processes for sustainable development

The nssd approach advocates the following sustainable development principles:

People-centred – more needs to be done to ensure that strategies benefit key stakeholders, particularly the poor.

Comprehensive and integrated.

Country-led and owned – there is no blueprint and countries need to identify their own approaches as externally driven strategies often fail.

Process and outcome orientated – past strategies have focused on a document without a follow-up process or concern with actual impacts.

High-level political commitment and influential lead institution – hard choices are required and this will require commitment from the head of state and senior ministers, as well as the more influential departments such as the finance and planning ministries.

Building on existing processes and strategies – most countries have a plethora of plans. The strategic planning process needs to build synergy and coherence between them; address conflicts; and identify gaps and priorities for action.

Participatory – ensuring the existence of inclusive structures and mechanisms full participation of central and local government, the private sector, civil society as well as marginalised groups.

Effective monitoring, learning and improvement – strategy formulation needs to be an iterative process with monitoring and follow-up to learn lessons.

Consideration of future needs – there is a need to assess future needs such as rising urban populations and climate change.

Setting targets and priorities – strategies need to identify clear priorities which can be linked into the budget process.

Strengthening capacity – strategies need to be aware of the human resource and skill constraints they face and make provision for developing capacity where required.

- **Expand the natural asset base of the poor** through transferring ownership of natural assets to the poor (such as the recognition of community forest law, the creation of community forest rights or rights to other resources) and promoting pro-poor land reform.
- **Co-manage and co-invest in environmental services and resources with the poor**, through promoting and strengthening community management of environmental resources, and assisting the poor to overcome the high initial costs for receiving better quality environmental services (such as water supply and sanitation, renewable energy and waste management).
- **Promote environmental infrastructure and technology that benefits the poor** through a greater focus on tackling the environmental problems and hazards that impact most upon the health and livelihoods of the poor, and through developing

affordable and environmentally sound technologies that are needed by and can be used by the poor.

- **Make resource transfers to the poor** through reducing subsidies for environmental services that benefit the non-poor (such as energy and water) and increasing investments in areas in which the poor live and work.

4.6 Working up such programmes will be challenging. The underlying concepts need to be adopted by the international community. The EC and UNDP poverty and environment initiative has brought together ministers from the North and South, representing both development and environment portfolios. The ministers have agreed to play a leadership role to promote changes in this direction at the national and international levels, and to commit themselves to trying to implement the approaches through domestic policies and aid partnership programmes.

⁴²Chairmen's Report, UNDP-EC Poverty and Environment Initiative, Forum of Ministers, New York, 29th September 1999. See also the papers on the web site, www.undp.org/seed/pei.

Other actions within poor countries

4.7 Apart from policies and projects to directly reduce poverty while effectively managing the environment, there are other actions that need to be taken. They are grouped by type below:

A. *Governance*

- good governance, access to justice, opportunities for people to participate at both local and national levels in decisions that affect them and a sound legislative framework which incorporates clear property rights are prerequisites for environmental improvement;
- encourage resource-based legal frameworks for coastal resources, water resources, forestry, land management and biodiversity;
- encourage government agencies to shift to a more participatory management regime with due attention being paid to resource conservation as well as production; and
- build capacity for more effective environmental management within developing countries and for more effective participation in international environmental negotiations.

B. *Aspects of market failure*

- use market-based instruments and economic policies as much as possible to minimise administrative burdens, recognising that environment ministries in developing countries are often newly established, relatively weak with small budgets and administrations;
- end environmentally damaging subsidies, introduce and raise user charges, increase low resource use taxes, increase charges for environmentally damaging activities and use incentives for environmentally beneficial activities; and
- ensure that market prices reflect full environmental and social costs so sending appropriate signals to consumers.

C. *Private sector*

- encourage the private sector, both large companies and small and medium-sized enterprises, to integrate environmental concerns into their decision-making by assistance to industry organisations, promotion of industry codes of conduct and environmental auditing standards,

introduction of the polluter pays principle and more effective enforcement and public pressure; and

- promote the development of environmentally friendly private sector products such as clean technology, energy efficiency technology and environmentally responsible tourism.

D. *Environmental awareness*

- assist civil society to promote environmental awareness, more effective environmental management, and greater understanding of the effect of patterns of consumption on the environment;
- integrate environment and its role in human development across the educational curriculum and improve public access to environmental information;
- encourage public participation on environmental issues; and
- build political will for better environmental management.

4.8 There are also win-win actions which provide both local and global environmental benefits and contribute to sustainable development. As already noted, China has significantly reduced the carbon intensity of economic growth by lowering energy subsidies and restructuring its industry. Adaptation to the impacts of climate change can start to be built into programmes and policies. For example, new infrastructure should be built in areas where it will be less vulnerable to a rise in sea levels; or farmers should not be encouraged to plant crops which research has shown are vulnerable to rises in temperature.

4.9 With respect to research and the generation of knowledge, the broad conclusion is that the international community should look for technology that is pro-environment and pro-poor, using natural resources efficiently and sustainably with less generation of pollution and waste, while also creating jobs for poor people and expanding their access to basic social services. It will also be important to encourage the use of renewable energy technologies while reducing their costs.

International trade

4.10 Increased trade liberalisation is compatible with better environmental management. However, it requires developing countries to develop appropriate policy/legislation on the environment and to

better enforce such measures. It also requires priorities to be set by donors for related assistance in their development co-operation programmes. There is a synergy here in assistance to build capacity for management of national environmental resources, and to meet the obligations of developing countries under multilateral environment agreements. Part of the challenge is also to encourage better communication between trade and environment ministries.

4.11 The EU has set out certain priorities for specific negotiations on trade and environment in a new trade round. These include the WTO compatibility of eco-labelling schemes, the operation of the precautionary principle and the relationship between multilateral environment agreements and WTO rules. At present, there are concerns that a lack of full certainty about the relationship between the two sets of rules may inhibit the development and application of trade measures in multilateral environment agreements, although there has never been any challenge to existing agreements in the WTO. Clarification of the relationship between multilateral environment agreements and WTO rules would reduce the potential for conflict. A legally binding change to WTO rules would be the most satisfactory arrangement. This could take a number of forms.

4.12 It remains to be decided how this would work. Developing countries are extremely sceptical about the inclusion of environmental issues in trade negotiations. We have to overcome the fear of the majority of WTO members that negotiation will lead to eco-protectionism. It is vital that changes in WTO rules take account of the capacities and constraints of developing countries. There is an urgent need to improve the quality and broaden the scope of North-South dialogue on the issues surrounding the interface between trade and sustainable development. Capacity-building should be used to improve understanding of trade and environment linkages, foster improved policy integration at the national and regional levels, and to enhance the ability of developing countries to participate in the multilateral trading system.

International actions

4.13 There are three main priorities at the international level, the rationale for which have been discussed earlier in this paper. The first is to ensure the principles of sustainability (as set out in national strategies for sustainable development) are fully taken into account in Poverty Reduction Strategies and the Comprehensive Development Framework. In the first place, this requires developing countries to take these issues into account, and then for IMF and IBRD Boards to reinforce their inclusion. The ultimate aim is a greater convergence between the three country-level frameworks. The second is to encourage efforts towards more systematic work on green accounting, building in the costs of environmental degradation to the conventional estimates of gross domestic product. Finally, it is very important that the Clean Development Mechanism is agreed and brought into operation as soon as possible. It represents a significant opportunity to increase private investment flows to developing countries, particularly for environmentally beneficial technologies. In addition, the Kyoto Protocol to the Climate Change Convention should be brought into force. Member states of the European Union are committed to ratification by 2002.

Rio + 10

4.14 The Rio + 10 conference in 2002 represents an important opportunity to discuss many of the issues in this paper at a high political level. Countries should be encouraged to participate effectively to reinvigorate the theory and practice of sustainable development. Issues of particular significance are further work on the links between poverty elimination and environmental opportunities; the development and formulation of effective processes for sustainable development, together with agreement on how to monitor the achievement of the first part of the International Development Target; and aspects of possible institutional reform for effective environmental governance, both at national and global levels.

5. Priorities for DFID

5.1 DFID's aim is the elimination of poverty. Protection and better management of the natural and physical environment is one of three specific objectives by which DFID will meet this aim. DFID will seek to help meet the International Development Target for the environment by specifically focusing upon those actions which contribute to poverty elimination. As the foreword stresses, this paper does not seek to set out detailed activities. These will follow within the broad areas set out below.

5.2 Environmental degradation impacts upon the health and quality of the livelihoods of the poor. It is an important cause of poverty. The evaluation of the environmental performance of DFID concluded that the environment as a potential development opportunity has not been fully mainstreamed across the bilateral programme. We believe that this is a problem shared by those engaged in development who are attempting to be sensitive to environmental concerns. A key challenge for DFID is to ensure that we analyse the links between environmental degradation and poverty in a more systematic manner, deepen our understanding of the underlying causes and address environmental issues where they are shown to be important for the sustainable elimination of poverty.

5.3 The UK has a strong interest and expertise in environmental issues and how they relate to poverty. Our experience in the preparation and implementation of the UK's Sustainable Development Strategy provides us with experience which we can share. We can also learn from the experience of others.

5.4 Using its own bilateral programmes with partner countries, DFID can take actions at three levels to reduce environmental degradation in ways that impact upon poverty elimination. We can focus support on the poor themselves by assisting them to tackle environmental problems that directly impact on their health and livelihoods. We can take a more inclusive approach by addressing the environmental degradation caused by other groups, but which impact on the health and livelihoods of the poor. We can also assist in strengthening the policy and institutional framework to protect and better manage the environment in ways that benefit the poor.

5.5 The priorities for DFID are set out below at both the country and international levels. We have also highlighted the actions that DFID will take to try to ensure consistency in the policies of different UK government departments. We will also identify new internal procedures and approaches that DFID will develop and implement in order to integrate the environment more systematically into our development programme and policies.

Working with partners at the country level

A. Analysis of the links between environmental degradation and poverty

5.6 DFID will give increasing emphasis to analysing the ways in which environmental degradation is a cause of poverty. We will also provide assistance to our partners to assist them to analyse these linkages. We will attempt to ensure that Poverty Reduction Strategies promoted jointly by the IMF and the World Bank, and macroeconomic policies more generally, take due account of the environment and broader considerations of sustainability. The outcome of such analyses may highlight new areas for DFID to assist our partners take actions to reverse trends in environmental degradation that impact upon the poor. Work has started in Bangladesh, in central and southern Africa and in selected states and provinces in India and China.

B. Promote sustainable development principles

5.7 One mechanism for ensuring that the key issues of sustainable development are integrated at the country level is by incorporating them into ongoing planning processes. DFID has established a Sustainable Development Unit to assist developing country partners promote the application of these principles. Many of the principles are incorporated in the stated aims of the Poverty Reduction Strategies. However DFID can help ensure that these principles are observed in practice. We can play a role in monitoring and demonstrating the 'value-added' that these principles provide in practice. DFID will particularly promote the principle of participation and local ownership by encouraging civil society groups to engage constructively with national planning processes.

C. Sector-wide programmes to include important environmental concerns

5.8 DFID needs to ensure that sector-wide policies and programmes, such as health, education, agriculture, transport, energy and public sector reform routinely include analyses which look to capitalise on environmental opportunities and take account of environmental constraints. The use of strategic environmental assessment techniques will be an important tool in this effort. In addition, we will seek to identify and implement environmental activities that add value to sectoral programmes, for example, through initiatives in environmental health, environmental education and environmental engineering.

D. Support civil society, private sector and knowledge and research programmes that reduce poverty by better environmental management

5.9 Earlier sections have made clear the key role played by civil society and the private sector in promoting good environmental management. DFID has a strong relationship with civil society in the UK through informal links and substantial Challenge Funds. We have co-operated with BP-Amoco in Poland on a project to raise environmental standards in small and medium enterprises and with private sector textile companies in Egypt to increase their export markets while reducing pollution. DFID can use its existing and developing links with these stakeholders to promote and strengthen this role. DFID funded knowledge and research can be utilised to promote pro-poor and environmentally friendly technology. We shall also ensure that the outputs of existing research are effectively disseminated. We shall commission new research to develop techniques and examples of poverty reduction through better environmental management, such as the use of fuel efficient stoves and other technologies that have a direct impact on poor people.

5.10 It is important to raise environmental awareness generally. Environmental education provides an opportunity to increase understanding of the links between environment and poverty and the implications of unsustainable consumption. In addition, studies have shown that environmental education is an effective way of introducing new teaching methods which help maintain attendance at primary schools, especially by girls, thereby contributing to the achievement of the target for universal primary education. We will undertake a study to identify how we and our partners can mainstream environmental education into national policies and sector programmes.

E. Reform of environment related institutions and policies

5.11 We will also give increased emphasis to capacity-building in partner countries for more effective environmental management and to incorporate local, regional and global environmental issues more fully into national priorities. The overall aim should be to integrate environmental issues into economic decision-making by strengthening the environmental management system as a whole, not just an environmental agency in isolation.

F. Increase in country benefits from global conventions

5.12 Enhanced capacity within developing countries will be needed to help partners maximise the benefits they receive from the multilateral environment agreements and to influence negotiations within the various fora to their advantage. Apart from the funds available from the Global Environment Facility, the most significant opportunity to emerge from the negotiations so far is the Clean Development Mechanism, where DFID may have a role in ensuring that the mechanism properly promotes sustainable development as well as securing additional reductions in emissions. In co-operation with other donors, we will consider promoting access by poorer countries, particularly within Africa, to the Clean Development Mechanism. We will also try to influence the choice of projects, encouraging smaller scale interventions such as improved domestic stoves to reduce the chronic health impacts of indoor air pollution.

5.13 DFID will also work to ensure linkages between policies and programmes which can meet both national and global environmental objectives. There are also important benefits for developing countries in using ratification of the multilateral environment agreements to import better regulatory regimes, and thus to resist powerful local interests that may militate against sustainable development.

G. Environment, conflict and disaster prevention

5.14 The increasing frequency and intensity of natural and man-made disasters clearly demonstrate the need for enhanced disaster preparedness at both national and international levels. The ability to manage crises is critically dependent on the availability of information linked to national networks, and a rapid, co-ordinated response. Global communications technology provides a powerful tool to support information needs for the management

of emergencies, but developing countries need the capacity to use the information effectively and in a timely manner.

5.15 We will look at the effects of environmental disasters on long-term development plans. Where appropriate, we will support the inclusion of environmental disaster prevention and mitigation measures in national strategies for sustainable development and major long-term development projects. We will also help developing country partners strengthen their capacity to use information in order to avoid or mitigate environmental damage which subsequently increases the vulnerability of the poor to disaster.

5.16 There is an increasing consensus that environmental stress is a significant factor in triggering or aggravating violent conflict in developing countries and countries in transition. Global environmental changes, such as climate change, are expected to greatly increase the extent to which environmental stress becomes a significant cause of conflict which impacts upon the poor in developing countries. As part of a wider UK Government effort, DFID will work to better understand the linkages between environmental stress and conflict, and identify ways to ensure that environmental factors are integrated into strategic conflict assessment procedures and disaster prevention work. An initial desk study has already been completed.

Working internationally

A. Share experience and lessons with other donors

5.17 Many other bilateral and multilateral agencies are facing the same challenges as DFID and are seeking to understand the effect of environmental degradation on poverty and to mainstream the environment as a development opportunity. We will work to share experience and lessons on addressing these challenges with our major partners – the EU, the World Bank, the regional development banks and other bilateral donors through the OECD Development Assistance Committee. We are actively involved with the World Bank on both its own environmental evaluation and the formulation of its new strategy. We also intend to contribute to the 2002 World Development Report on sustainable development. We will consider strengthening the Environmental Unit within the IMF by seconding an environmental professional to it. We will be supportive of the efforts of the Environmental Management Group within the UN system.

5.18 Within the European Union, we will help implement the conclusions on environmental integration of the November 1999 Development Council which called for the Commission to prepare a specific strategy, including a timetable, for the implementation of the strategic, operational and organisational measures required to integrate the environment into the Community's development policies. In addition, the December 1999 European Council held in Helsinki requested that work on integrating the environmental dimension in all of the Commission's work be concluded by the June 2001 European Council. It also intends to adopt a strategy for sustainable development for the European Union on the basis of a Commission proposal.

5.19 In response to the November Development Council, the Commission produced an information note in April 2000 on progress in integrating the environment and sustainable development into European Community development policy. We will work with our EU partners and the Commission to try to ensure that environmental considerations are placed more firmly at the heart of EC thinking and practice in relation to poverty elimination. Meetings of experts on environmental integration were held in June and September 2000.

B. Share experience and lessons with developing country partners

5.20 There is also a critical need to share experience and lessons with developing countries and countries in transition. The UK is actively involved in the UNDP/EC initiative to document the links between the poverty and the environment, with regular meetings by environment and development ministers from both the North and the South. We will look at opportunities to support some elements of the initiative, which will now move away from international advocacy to more country-focused effort. In addition to the UNDP/EC Forum, there should be regular exchanges, perhaps through the establishment of an consultative group on environmental mainstreaming. DFID will explore this with its development partners.

C. Reach international agreement on convergence of country led frameworks

5.21 The UK jointly chairs with the EC a DAC task force on national strategies for sustainable development. It is sponsoring dialogues with key stakeholders in developing countries. Its recommendations will be used to develop best practice guidance for DAC members to assist developing countries. The task force will also work up criteria to assess the extent to which development is

sustainable, and thus whether a country is meeting the target set by the 1997 UN General Assembly Special Session. As the task force has developed, its main emphasis has been to promote the idea of convergence in country strategies. The work of the task force will feed into conclusions on sustainable development as part of the DAC's preparations for the Rio+10 conference.

D. Support the global environmental funding mechanisms

5.22 DFID will continue to participate fully in future replenishments of the Global Environment Facility and the Montreal Protocol. We will use our position on the Council of the Global Environment Facility to argue for it to lead on mainstreaming global environmental issues into the plans and policies of all governments and the agencies with which it works. We shall take a constructive approach to its third replenishment, on which discussions will commence later this year and conclude in the first quarter of 2002. Some of the issues to be discussed in the replenishment will be a shift to more strategic forms of intervention, such as environmental programme lending; and the need to streamline procedures, expedite disbursements, and open up to more implementing agencies. A \$440 million replenishment for the Montreal Protocol for the period 2000–2002 was concluded in December 1999. We will want to place more emphasis on the formulation of appropriate domestic policies, to ensure that reductions in ozone depleting substances are sustainable.

Working to ensure policy coherence in the UK and EU

5.23 It is important that overall UK policies take full account of the environment. DFID will promote consistency in environmental policy with other UK government departments. For example, we will seek to ensure that UK and EU policies on international trade, labour standards, investment and intellectual property rights are consistent with the environmental interests of developing countries. This will be particularly important in the early stages of any new trade round. Trade rules should not be used to impose unfair standards on developing countries. It is vital that changes in WTO rules take account of their capacities and constraints, to ensure that trade liberalisation can bring both environmental and economic benefits.

5.24 We will also seek to ensure that the economic and social interests of developing countries influence

UK policy towards multilateral environment agreements, such as the Convention on Climate Change and its Kyoto Protocol. We will endeavour to ensure that other government departments are able to draw on DFID's knowledge and expertise as appropriate, particularly when DFID's input could be crucial in helping to secure a better outcome for both developing countries and the environment.

5.25 All of the multilateral environment agreements deal with interlinking factors and solutions. Attempts to move towards an integrated approach have been largely symbolic to date, largely because of the single subject focus of the agreements. The main problem is lack of co-ordination and coherence. We shall concentrate on the three major agreements – biodiversity, climate change and desertification. We shall work with other government departments and the international community to improve co-ordination and coherence by streamlining and integrating national reporting requirements; removing barriers created by the single issue focus of the conventions; developing an overall approach to training and capacity-building covering several conventions; integrating scientific assessments; and examining the potential for combining meetings of the convention bodies. We will also work to help ensure an effective multilateral agreement is negotiated to control persistent organic pollutants.

5.26 With respect to export credits, the UK's Export Credits Guarantee Department (ECGD) has introduced an environmental screening procedure to identify at an early stage whether projects raise environmental concerns which may need further investigation, before a decision on ECGD support is made. The UK is also strongly supportive of discussions in the OECD Export Credit Working Party to establish environmental guidelines for export credit agencies for the appraisal of projects. The Report on ECGD's Mission and Status Review, which was announced by the Secretary of State for Trade and Industry on 25 July 2000, sets out the ECGD's new mission statement and how its support will be used to contribute to wider government objectives, including sustainable development, human rights, good governance and trade.

Working internally to mainstream the environment

5.27 DFID will improve its internal procedures to ensure that environmental issues are properly integrated

into DFID policies and programmes. They are grouped by type below:

A. *Overall strategy*

- incorporate environmental considerations into institutional and country strategy papers and country poverty assessments;
- develop and disseminate case studies of opportunities for poverty reduction and environmental protection;
- develop strategies for promoting actions to tackle environmental problems that link closely with good governance, economic reform and public participation; and
- help DFID regional offices prepare and implement environmental approach papers.

B. *Programme and project related*

- encourage DFID managers to adopt a longer term perspective;
- create a stronger network of advisers in other disciplines who handle environment issues, for example, engineering, health, natural resources, education, governance;
- use environmental screening as a way to incorporate environmental opportunities (as opposed to merely avoiding environmental problems) much earlier in the project cycle, and particularly at the design stage;
- provide country programmes, policy, operational and research departments in DFID a responsive and reliable source of environmental advice to meet their needs. This will be effected by building the capacity of the team of environmental advisers in London and overseas, and hiring consultants via resource centres and enabling agreements; and

- emphasise the identification of local environmental expertise.

C. *Environmental awareness*

- run training courses to raise awareness among staff on the impact of environmental degradation on poverty and in the use of the DFID Environmental Guide and Screening Summary Note; and
- collaborate with NGOs and others to identify successful methods of integrating environmental concerns into organisational practice, and to promote their use.

5.28 In addition to the above, there is a need for stronger cross-sectoral collaboration and joint approaches by environmental advisers with social development, health, governance, economics and sustainable livelihood colleagues. This could be effective in several ways. For example, early intervention on the environment could help health objectives by assisting with preventing the causes of disease. Close co-operation of environmental, engineering and physical planning advisers with economists should yield benefits in terms of the design of more effective market-based instruments for dealing with environmental costs and benefits. Co-operation with social development and governance advisers will be essential to encourage the participation of broader sections of society in priority-setting and decision-making and strengthening the efficiency and transparency of institutional arrangements to allow this to happen.

6. Monitoring progress

Sustainable development indicators

6.1 The effectiveness of the International Development Targets depend on the extent to which progress towards them can be monitored and strategies to improve performance can be developed and implemented. However, measuring performance for the environment target is particularly difficult.

6.2 A good assessment of the problem is contained in UNEP's 2000 Global Environment Outlook. It notes that much data is incomplete, and sometimes non-existent. The quality of much of the data is of equal concern. There are problems of reliability and consistency between subject areas and countries. Trend detection requires time series data. Much data are one-off collections of figures. Assessments at regional and global levels require the aggregation of data relating to smaller areas. This is only possible if the data measure the same thing in the same way and with the same precision. Available data frequently does not measure up to these specifications. UNEP conclude that these shortcomings make integrated, cross-sectoral global assessment and trend analysis always difficult and sometimes impossible.

6.3 Against this background, there has been much international discussion on how to measure progress towards the International Development Target. At a meeting of a DAC Forum on indicators in Paris in March 2000, a core set was agreed. They are as follows:

- existence of effective processes for sustainable development;
- percentage of population with sustainable access to safe water;
- forest area as a percentage of national surface area;
- percentage of land area protected;
- GDP per unit of energy use;
- industrial CO₂ emissions.

6.4 In addition, two global indicators were agreed – the size of the hole in the ozone layer (Table 2); and the concentration of greenhouse gases in the atmosphere and the heating effect of those gases (Table 3).

6.5 The agreement on indicators represents only the start of the process. There are significant numbers of developing countries which have no relevant data

for many of the indicators. Where data is said to exist, it often derives from a modelling relationship rather than by direct measurement or observation. Countries should be encouraged to develop their own relevant national and local indicators. Efforts should be made to assist countries to develop their information systems to produce the required data to monitor particular environmental issues which are of specific concern. Such indicators should be formulated as part of the sustainable development process and will need to be adjusted as changes take place.

Poverty and environment indicators

6.6 This paper has highlighted the important links between environment and poverty, particularly those relating to health, livelihoods and vulnerability. Given our focus on poverty reduction, it is vital to have good indicators for analysing poverty and environment linkages. We will be commissioning further work to identify them. The indicators will inevitably be country specific.

Indicators for strategic processes for sustainable development

6.7 Following the DAC's agreement in March 2000 of a set of core indicators, the indicator 'effective processes for sustainable development' has replaced the previous definition which talked purely about the existence of national strategies for sustainable development. The redefinition of the indicator is an improvement. It reinforces the understanding that national strategies for sustainable development are processes, not plans. It also highlights the point that existing strategies may be acceptable; and it is not susceptible to a yes or no answer.

6.8 To judge whether the target for the implementation of national strategies for sustainable development by 2005 is met will require international agreement on what constitutes such a strategy. Unlike the other International Development Targets which can be measured quantitatively, this target will require a largely qualitative assessment. While most countries can demonstrate some sustainable development principles being adopted, few – if any – can claim that all of them have been achieved. If progress on the target is based on self-reporting, there will be a temptation by all countries

to claim success. There may be a need for a more independent process of assessment or peer review.

6.9 At present, very little work has been done to address these issues. The work of the DAC task force is designed to develop criteria for such an assessment. The UN Division for Sustainable Development has organised a series of regional consultations which have addressed the key characteristics of national strategies for sustainable development. These include many of the principles set out earlier in this paper. Some practical examples of these approaches are also found in the work of Capacity 21 (a trust fund administered by UNDP) which increasingly is focusing on disseminating lessons of sustainable development through publications and regional seminars. In addition to the work of the UN and the OECD, many of the principles of sustainable development are set out in the stated aims of the World Bank's Comprehensive Development Framework and Poverty Reduction Strategies. The Bank intends to undertake an independent evaluation of both of these programmes. This will provide a useful guide to the extent that they have lived up to their stated principles, and could be used as a monitoring tool. DFID will participate in this evaluation.

6.10 It is particularly important to ensure that the views of developing countries are properly represented in order to develop effective monitoring of strategic processes for sustainable development. Criteria need to be debated and agreed internationally. The Rio +10 Summit, to be held in 2002, and the preparatory fora which precede it, provide opportunities. This debate should occur in conjunction with the agreement of a process for verification of all the International Development Targets.

Sustainable development indicators: economic approaches

6.11 The Brundtland definition of sustainable development has been interpreted by economists as requiring that an economy's wealth does not decline through time, i.e. that each year investment should exceed the consumption of all forms of capital. In order to ensure that the three pillars of sustainability – economic, social and environment – are included, it is necessary to add measures of social and natural wealth to conventional national accounting measures⁴³. This approach is known as 'genuine savings'. Social wealth or 'human capital' is

measured in terms of educational spending, while natural capital is measured by valuing forest and mineral reserves⁴⁴.

6.12 The results and their interpretation are still controversial. Some argue that it is acceptable to substitute between different kinds of capital stock, for example, by investing revenue from forest depletion in educational spending (known as weak sustainability), while others argue that some forms of natural capital, such as the climate, are 'critical' and cannot be substituted for other kinds of capital (known as strong sustainability). However, the approach does highlight in a quantitative way the various economic trade-offs that can be made and thus makes sustainable development more accessible to economic policy-makers. The World Bank now publishes data on genuine savings for each country as part of its annual World Development Indicators, and intends to start to include this data in Country Strategy Papers.

Strengthening capacity to measure performance

6.13 The need to monitor progress has highlighted the gap between the ability to measure and the demand for statistical information. In many cases, statistical capacity is not seen as a priority for funding by national governments. DFID is working closely with the World Bank and the UN in an effort to raise the priority of capacity-building in this area. There is a need for technical assistance in statistics which must be addressed both in terms of monitoring progress towards the International Development Targets, and providing a sounder basis for development planning. We are also looking at existing country systems through our bilateral programmes, and hope to raise awareness within governments of the importance of national statistics. Increased national funding will not happen unless policy-makers and civil society use and value the statistics produced.

6.14 Capacity-building is also an important subject for the Conventions of Climate Change and Biodiversity. Under the former, developing countries will produce communications on their overall greenhouse gas emissions, with finance and technical assistance provided under the Global Environmental Facility. It may also be possible to use the forum of the Desertification Convention to highlight the lack of information under this indicator and to develop a programme to meet this need.

⁴³Conventionally, the stock of wealth can be measured as the value of the initial capital plus gross domestic investment minus depreciation, while changes in wealth can be measured as gross saving: GNP minus public and private consumption.

⁴⁴*Expanding the measure of wealth: indicators of environmentally sustainable development*, World Bank (1997).

Assessing DFID's performance

6.15 DFID is committed to assessing its own contribution. An important instrument for doing this is DFID's Public Service Agreement (PSA)⁴⁵ which sets out indicators for assessing DFID's performance against key departmental objectives, including progress towards the International Development Targets. The linkages between DFID's inputs – our spending and activities – and 'real world' results in terms of progress towards the targets are complex and difficult to quantify. However, the PSA provides a coherent and logical basis for linking the performance of DFID programmes with the achievement of our overall objectives.

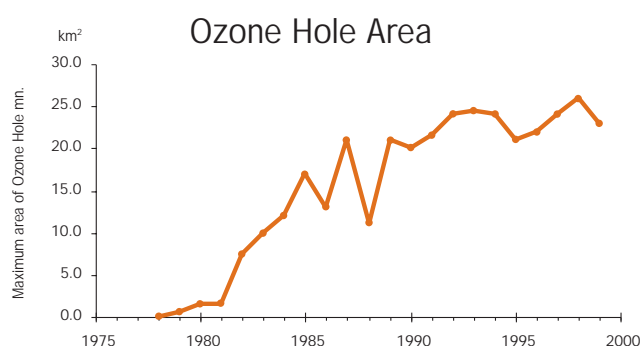
6.16 In recognition of the difficulties in directly measuring progress towards the environment target, DFID's Public Service Agreement includes a performance target tracking progress in gaining international agreement on the integration of social, economic environmental aspects of sustainable development into poverty reduction programmes.

6.17 DFID has prepared strategies to guide its work at country level and in relation to other development institutions⁴⁶. Developed through consultation, these strategies include appropriate and coherent sets of indicators for assessing the progress of DFID-assisted programmes sectorally, nationally and internationally. Regular review of country strategies and institutional strategies will encourage lesson learning and improved performance, particularly where such reviews are led by the appropriate agencies within developing countries themselves. They will include assessment of how effectively environmental considerations have been integrated into DFID's programmes of assistance to partner countries and through international institutions.

6.18 Routine monitoring and evaluation also continues to capture project and programme level performance information to guide development planning and implementation, and identify best practice for future activities.

Table 2: Size of the hole in the ozone layer
(In million square kms.)

Year	Ozone Hole Area
1978	0.0
1979	0.5
1980	1.5
1981	1.5
1982	7.5
1983	10.0
1984	12.0
1985	17.0
1986	13.0
1987	21.0
1988	11.0
1989	21.0
1990	20.0
1991	21.5
1992	24.0
1993	24.5
1994	24.0
1995	21.0
1996	22.0
1997	24.0
1998	26.0
1999	23.0



Note: Figures and graph show the maximum one day ozone hole area each year. The small dip between 1998 and 1999 is not significant. There is a lot of natural variability in the stratosphere, apart from the presence of ozone depleting chemicals

Source: World Metereological Organisation, Dr Rumen Bojkov, Special Adviser to the Secretary-General, WMO, on ozone and global environmental issues

⁴⁵All UK government departments are required by the Treasury to prepare Public Service Agreements, against which performance is reported annually. Linked to each PSA is a Service Delivery Agreement (SDA) which sets out operational targets and indicators, again for annual reporting.

⁴⁶See DFID's range of Country Strategy Papers and Institutional Strategy Papers.

TABLE 3: Changes in main greenhouse gas concentrations

Year	CO ₂ *	CH ₄ **	N ₂ O **	CFC11#	CFC12#	CO ₂ equivalent	Heating effect
1965	319.6	1312.0	293.8	27.8	72.0	341.4	0.9737
1966	320.9	1326.0	294.3	33.0	81.8	343.6	1.0077
1967	321.6	1340.0	294.8	38.7	92.9	345.1	1.0320
1968	322.3	1355.0	295.2	45.3	105.0	346.7	1.0566
1969	323.4	1370.0	295.7	53.2	118.5	348.8	1.0890
1970	324.7	1386.0	296.2	61.7	133.0	351.2	1.1254
1971	325.5	1401.0	296.7	71.1	148.4	353.0	1.1535
1972	326.5	1417.0	297.2	82.0	165.5	355.1	1.1860
1973	328.5	1433.0	297.7	94.5	184.6	358.4	1.2358
1974	329.2	1449.0	298.2	107.5	204.4	360.3	1.2644
1975	330.2	1465.0	298.8	118.0	220.9	362.5	1.2968
1976	331.2	1481.0	299.3	130.0	237.1	364.6	1.3289
1977	332.7	1497.0	299.7	142.6	255.2	367.4	1.3694
1978	334.5	1514.0	300.0	148.5	271.4	370.4	1.4139
1979	336.0	1530.0	301.0	168.8	286.5	373.3	1.4559
1980	337.9	1547.0	301.2	184.1	300.3	376.4	1.5013
1981	339.3	1563.0	302.4	200.5	320.4	379.4	1.5441
1982	340.2	1580.0	303.4	217.9	337.1	381.8	1.5777
1983	341.9	1597.0	304.0	237.5	354.3	385.0	1.6229
1984	343.5	1614.0	304.8	258.1	365.8	388.0	1.6659
1985	344.9	1618.0	305.0	283.3	387.4	390.6	1.7018
1986	346.2	1631.0	306.0	308.3	409.4	393.6	1.7429
1987	347.9	1642.0	305.8	335.6	427.3	396.6	1.7839
1988	350.1	1653.0	307.1	363.7	445.1	400.6	1.8386
1989	351.7	1666.0	308.0	392.0	462.9	403.9	1.8831
1990	353.0	1676.0	308.7	420.2	478.7	406.7	1.9200
1991	354.1	1686.0	309.5	447.1	492.0	409.3	1.9539
1992	355.2	1695.0	309.9	473.3	503.8	411.6	1.9848
1993	356.0	1697.0	310.5	498.8	510.8	413.4	2.0077
1994	357.6	1704.0	311.0	524.8	517.5	416.1	2.0442
1995	359.5	1709.0	311.6	551.4	522.8	419.3	2.0845
1996	361.1	1710.0	312.3	574.6	526.3	421.8	2.1177
1997	362.3	1718.0	313.1	593.1	529.9	424.1	2.1470
1998	365.0	1725.0	314.0	607.6	533.0	428.1	2.1974

* Parts per million.

** Parts per billion.

Parts per trillion - figures for CFC11 include other gases expressed as CFC equivalents.

Notes

CO₂ equivalent - represents the equivalent amount of CO₂ which would give the same heating effect of all the gases combined expressed in parts per million.

Heating effect - shows how much additional heat is being trapped in the atmosphere. It is expressed in watts per square metre. Although the relative increase is not large, the effect can be great because it occurs over the entire surface of the earth.

“Source: Hadley Centre, Meteorological Office, UK.”

Annex 1

Country examples of strategic action for sustainable development

1. The following are country examples of strategic planning initiatives which begin to address many of the principles of sustainable development. Apart from the United Kingdom, none of the examples is labelled a national strategy for sustainable development. This is not important or particularly desirable. Rather more important is the strengthening of a country's existing strategic planning process to ensure the commitment to the key principles of sustainable development and progress towards the desired outcomes through a process of continual improvement.

(a) Ghana

3. Vision 2020 was launched in 1994. It is a framework for sustainable development which sets out a long-term strategy for Ghana to become a middle-income country by 2020. It is co-ordinated by the National Development Planning Commission (NDPC). It combines a framework of policies, strategies and ambitious targets for the country with a new approach to planning that integrates social, economic, political, technological and environmental dimensions and incorporates participatory decision-making. It enjoys high-level political support. There is a growing recognition within government and civil society that it is Ghana's key framework for the future. The vision is the result of extensive consultation and collaborative effort over four years involving a wide range of stakeholders. It has led to a national consensus around medium and long-term goals. It is being implemented in a series of five-year medium term development plans (MTDPs).

4. Sector plans from 20 ministries and 110 district plans were synthesised into the first MTDP for 1997–2000 and into a second MTDP for 2001–2005. Experience from the preparation and implementation⁴⁷ indicate that future challenges include linking resource allocations to the plan, dealing with institutional capacity constraints (particularly at district level) and strengthening monitoring and evaluation mechanisms for measuring outcomes and

impacts. Vision 2020 is in marked contrast to equivalent sustainable development strategies in many countries which often lack political support and are usually prepared by environmental ministries which have limited influence on and are marginal to key decision-making.

5. Ghana is also developing an interim Poverty Reduction Strategy. It will draw from Vision 2020 and the MTDP and will link these to the Medium Term Expenditure Framework. The process of developing the strategy will use the Planning Groups and consultative mechanisms established for the Vision 2020 process. The NDPC is to be responsible for drafting it in consultation with an Inter-Ministerial Committee, and it is to be based on the final version of the Vision 2020 second MTDP. Ghana's experience demonstrates a commitment to building on existing processes and mechanisms, and strengthens the likelihood that the priorities and commitments to a more sustainable development in Vision 2020 are captured in the Poverty Reduction Strategy.

(b) Bolivia

6. Bolivia has been implementing an Agenda 21 programme⁴⁸ embodying five sustainable development principles: the interdependence of the three pillars; recognition that economic growth, full social participation and the management and rational utilisation of natural resources are all essential to eradicating poverty; and acceptance that change is inevitable and necessary for both present and future generations. The development of the programme involved district and local level action which fed into the creation of the national plan. In 1993, a Ministry of Sustainable Development and Planning was created covering planning, sub-national development, environment and indigenous people.

7. Reforms include measures to increase popular participation in decision-making and implementation; a decentralised system of planning; legislation allowing 20% of budgets to be devolved and the allocation of

⁴⁷Brown-Farhat/NDPC. Paper on the Preparation and Implementation of Ghana-Vision 2020 presented at the First Planning Workshop of the Donor-Developing Country Dialogue on National Strategies for Sustainable Development. April 2000. Further information is available at www.nssd.net.

⁴⁸The UNDP's Capacity 21 programme has been supporting Bolivia's Agenda 21 programme. Further information about this and Capacity 21 can be found at www.undp.org.

expenditure for local sustainable development plans; the commitment of the Ministry of Sustainable Development to mainstream the environment and sound use of natural resources into all government policy; and the withdrawal of the state from various enterprises to promote growth. Lessons from Bolivia include the importance of high-level commitment to change and the importance of increased democracy and civil society participation.

8. In addition to the Agenda 21 programme, Bolivia has a National Dialogue process, initiated in 1997, to develop and implement Bolivia's poverty reduction programme. Bolivia is also a Comprehensive Development Framework pilot and a Heavily Indebted Poor Country (HIPC), and an interim Poverty Reduction Strategy Paper was produced in January 2000. There is commitment to link the processes of the National Dialogue and the development of the Poverty Reduction Strategy with the integration of the commitments made in their Agenda 21 programme⁴⁹. A National Dialogue workshop planned for August 2000 aims to take this integration forward and to establish a participatory body to follow-up and monitor commitments.

(c) Uganda

9. In 1997, the Government of Uganda launched a Poverty Eradication Action Plan (PEAP) which was intended to guide the formulation of all government policy to transform Uganda into a modern economy with the requirement that this economic growth should be sustainable.

10. To achieve the eradication of poverty, it set out two groups of actions which directly increase the ability of the poor to raise their incomes and improve their quality of life. A re-orientation of rural communities from subsistence farming to commercial agriculture was proposed and a plan for the modernisation of agriculture (PMA) was developed as a principal instrument for implementation of the PEAP.

11. In 2000, the PEAP was revised to take account of work undertaken since 1997, including the PMA, the Ugandan Participatory Poverty Assessment Project (UPPAP), and the work of the Poverty Monitoring Unit (PMU), the Poverty Status Report and the establishment of the Poverty Action Fund. During this revision it was

agreed with the IMF and World Bank that the PEAP would form Uganda's interim Poverty Reduction Strategy.

12. Work undertaken in Uganda highlighted that the wider issues of sustainability (and, in particular, environmental issues) related to the modernisation of agriculture had not been taken into consideration adequately in the PMA. As agricultural modernisation was proposed as the main agent for poverty eradication, and recognising that the revision of the PEAP may suffer the same deficiencies, Uganda and DFID agreed to collaborate to integrate environment and sustainability issues into the PEAP and PMA. This collaboration resulted in the involvement of the National Environment Management Authority (NEMA) in the consultative process; and has begun to address the inclusion of the principles and actions for sustainable development and environmental management into the PEAP. As well as the need for integration of these issues into the PEAP, it was also recognised that the implementation of actions of sustainability is a much greater task. A strategy has also been developed specifically to make the PEAP more successful and to enable NEMA to maintain the momentum.

13. The strategic planning process in Uganda demonstrates that, with timely modest input and commitment, wider issues of sustainability can begin to be integrated into Poverty Reduction Strategies. Such effort has resulted in a strategy which is more likely to result in lasting success than would otherwise have been the case.

(d) United Kingdom

14. In May 1999, the UK published *A better quality of life*, its strategy for sustainable development for the UK. This followed a public consultation process to promote awareness and understanding of sustainable development, to create a climate for change and to gain ideas and information on priorities. Regional consultation events were organised to try and make the process as inclusive as possible. An inter-departmental steering group was established to develop the strategy. It is designed to meet four main objectives at the same time: social progress which recognises the needs of everyone; effective protection of the environment; prudent use of natural resources; and maintenance of high and stable levels of economic growth and employment.

⁴⁹This process of integration is being facilitated through collaboration with the DAC task force on national strategies for sustainable development. Further information on the work of the task force and its collaboration with a number of developing country partners can be found at the nssd website referred to in footnote 61.

15. The strategy is a catalyst for change. It identifies priority areas for action, and indicators and targets to measure progress, against which the government will expect to be judged. It sets a broad framework for action by government and other sectors of society. It concentrates on key objectives to deliver a sustainable economy; build sustainable communities; manage the environment and resources; and achieve international co-operation and development. Key sub-national institutions are local authorities and the new devolved administrations in Scotland, Wales and Northern Ireland. The government has also set a target of 2000 for all local authorities to develop their own plans.

16. As well as the need for wide participation and high-level political support, there are other lessons from the UK experience. The publication of any strategy document is just the beginning of a long process. Indicators are important for focusing attention on what sustainable development means to people as well as for monitoring and assessing outcomes and achievements. Commitment to regular reporting may encourage implementation and demonstrate progress. The use of an independent body to monitor and review progress by the government and others is noteworthy. It is also important to have an effective dissemination programme to promote the agreed strategy.

Annex 2

International environmental agreements

The Convention on biological diversity

1. This Convention came into force in 1994. Its main objectives are the conservation of biological diversity; the sustainable use of its components; and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources. It covers access and use of genetic resources and indigenous knowledge, as well as technology transfer and biosafety. The Convention deals with all biodiversity and recognises that its conservation and sustainable use are of critical importance for meeting the food, health and other needs of the world's growing population. It recognises the dependence on biodiversity of people and communities. It focuses on action at the national level and requires all contracting parties to develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity and, as far as possible, to integrate these policies into relevant sectoral and cross-sectoral plans, programmes and policies.

The UN Framework Convention on climate change

2. The Convention was signed by over 150 countries at the 1992 Earth Summit in Rio and entered into force in 1994. Its objective is to stabilise greenhouse gas concentrations in the atmosphere at an acceptable level. This is to be achieved within a time-frame sufficient to allow ecosystems to adapt naturally to climate change, without threatening food production, and to enable economic development to proceed in a sustainable manner. Recognising that more stringent action was needed to avoid harmful climate change, developed countries agreed in 1997 under the Kyoto Protocol to reduce their greenhouse gases emissions by an average of 5.2% over 1990 levels by the period 2008–12. The Protocol has yet to come into force.

3. Although developing countries are exempt from achieving specific emissions targets, they are obliged to implement the basic principles of the Convention. These are based on the precautionary principle, i.e. without fully understanding the causes and effects of global warming, all parties to the Convention have agreed to take steps to prevent it happening by limiting or reducing greenhouse gases emissions. All parties are also obliged to prepare

national reports which detail the sources and sinks of greenhouse gases emissions, programmes to mitigate such emissions and measures to facilitate adequate adaptation to climate change.

The Montreal Protocol

4. The Protocol was signed in 1987 by virtually all the world's governments to eliminate or reduce the use of chemicals which damage the ozone layer. In 1987 there was no definitive scientific evidence that man-made substances were the direct cause of ozone depletion. However, governments agreed that the potential consequences justified the cost of control measures, measures which have since been tightened in the light of new scientific evidence and technological progress.

5. The Protocol explicitly recognises the different capabilities and needs of developing countries. They have until 2010 to phase out CFCs and halons. They will freeze use of methyl bromide in 2002 leading to phase out in 2015. Use of HCFCs will be frozen in 2016 and phased out in 2040. The Protocol makes provision for the transfer of appropriate technologies and skills to enable industry in developing countries to convert to ozone friendly alternatives and for assistance with necessary institution strengthening. The Multilateral Fund was established to meet the agreed incremental costs to developing countries of their phase-out of ozone depleting substances.

The Convention to combat desertification

6. The Convention entered into force in December 1996. Its aim is to combat desertification and mitigate the effects of drought, particularly in Africa. The Convention calls on affected developing countries to develop long-term strategies that focus simultaneously on improved productivity of the land and the rehabilitation, conservation, and sustainable management of land and water resources; address the underlying causes of desertification, paying special attention to socio-economic factors; promote awareness and facilitate the participation at community level, particularly women and the young, and provide an enabling environment by strengthening existing legislation or enacting new laws where necessary.

7. Developed countries are required to provide financial resources and other forms of support to help affected developing countries implement their long-term strategies and plans; to mobilise funding, including from the private sector; and to facilitate access to appropriate technology, knowledge and know-how.

The Rotterdam Convention on hazardous chemicals and pesticides in international trade

8. The Rotterdam Convention was adopted and opened for signature in September 1998. It will come into force when 50 countries have ratified it. Its aim is to promote shared responsibility and co-operation in the international trade of hazardous chemicals and pesticides by facilitating information exchange and setting out a national decision-making process on their import and export. It covers chemicals and pesticides which have been legally banned, severely restricted or declared severely hazardous in a number of countries. Its procedures are designed to help countries control the import and export and prevent illegal trade in such substances. Developed country parties are committed to provide technical assistance to developing countries to help them develop their capacity for the safe management of chemicals throughout their life-cycle.

Convention on international trade in endangered species

9. The Convention on international trade in endangered species is one of the oldest international environmental agreements, coming into force in 1975. The UK became a Party in 1976 and there are now more than 150 countries Party to the Convention. It is a legally binding agreement which establishes the international legal framework for the prevention of trade in endangered species and for the effective regulation of trade in other species.

Protocol on biosafety to the Convention on biological diversity

Negotiations on this Protocol began in 1996. Its objective is to help ensure an adequate level of protection in the safe transfer, handling and use of living modified organisms resulting from modern biotechnology. Its concerns are the possible adverse effect on the conservation and sustainable use of biological diversity, also taking account of risks to human health. Under the Protocol trans-boundary movements of living modified organisms would be subject to advanced informed agreement procedure under which the transfer could not take place unless the competent national authority in the importing state has been informed and agreed to the import. The Protocol was agreed at a meeting in Montreal in January 2000.

The proposed persistent organic pollutants Convention

11. Negotiations on a Convention for implementing international action on certain persistent organic pollutants began in 1998. These are chemicals used as pesticides or in industry or generated as unintentional by-products of combustion and industrial processes. They pose a serious threat to human health and the environment because they resist natural degradation. Exposure to them can result in cancers and damaged immune and reproductive systems. The aim of the Convention will be to ban, phase out or minimise the release of persistent organic pollutants.

Annex 3

Global and regional indicators of development progress for the international development targets

		World total	Developing country total ^a	East Asia & Pacific	Eastern Europe and Central Asia	Latin America and Caribbean	Middle East & North Africa	South Asia	Sub Saharan Africa
Population [millions]	1980	4,430	3,641	1,398	426	360	174	903	380
	1990	5,255	4,414	1,641	466	439	238	1,122	508
	1998	5,897	5,011	1,817	475	502	286	1,305	627
Reducing Extreme Poverty									
Population covered by at least one survey for poverty data [%]									
	1985–98 ^b	..	88.1	90.8	81.7	88.0	52.5	97.9	72.9
Population living on less than \$1 a day ^c [millions]	1987	..	1,183.2	417.5	1.1	63.7	9.3	474.4	217.2
	1990	..	1,276.4	452.4	7.1	73.8	5.7	495.1	242.3
	1993	..	1,304.3	431.9	18.3	70.8	5.0	505.1	273.3
	1996	..	1,190.6	265.1	23.8	76.0	5.0	531.7	289.0
	estimates for 1998	..	1,198.9	278.3	24.0	78.2	5.5	522.0	290.9
Population living on less than \$1 a day ^c [%]	1987	..	28.3	26.6	0.2	15.3	4.3	44.9	46.6
	1990	..	29.0	27.6	1.6	16.8	2.4	44.0	47.7
	1993	..	28.1	25.2	4.0	15.3	1.9	42.4	49.7
	1996	..	24.5	14.9	5.1	15.6	1.8	42.3	48.5
	estimates for 1998	..	24.0	15.3	5.1	15.6	1.9	40.0	46.3
Poverty Gap ^{c,d} [%]	1987	..	8.6	6.8	0.1	5.2	1.0	13.0	20.0
	1990	..	9.0	7.6	1.0	6.0	0.5	12.0	20.4
	1993	..	8.9	7.5	1.3	5.8	0.4	11.2	21.7
	1996	..	7.5	4.0	1.5	5.3	0.4	10.6	21.5
	estimates for 1998	..	7.2	4.2	1.6	5.3	0.2	9.5	20.1
National income/consumption by poorest 20% [share that accrues to the bottom 20% of the population]	1980s	..	..	6.3	9.8	3.7	6.6	7.9	5.7
	1990s	..	..	6.9	8.8	4.5	6.9	8.8	5.2
Prevalence of child malnutrition, weight for age									
	1992–98 ^b	30	31	22	8	8	15	51	33
[% of children under 5 years old]									

			World total	Developing country total ^a	East Asia & Pacific	Eastern Europe and Central Asia	Latin America and Caribbean	Middle East & North Africa	South Asia	Sub Saharan Africa	
Universal Primary Education											
Net primary school											
enrolment [school age in school as % of all school age children]	Female	1980	77	72	82	91	85	64	52	49	
		1990	86	83	96	95	88	82	65	52	
		1997	88	86	99	99	93	84	70	54	
	Male	1980	86	83	90	93	86	84	75	59	
		1990	91	89	99	95	88	92	82	59	
		1997	92	91	99	100	95	91	83	66	
	Total	1980	81	78	86	92	85	74	64	54	
		1990	88	86	97	95	88	87	74	56	
		1997	90	88	99	100	94	87	77	„	
Persistence to grade 5		1990–1995 ^b	77	74	91	„	76	90	56	67	
[% of children enrolled at Grade 1 who reach Grade 5]											
Youth literacy rate [% of people 15–24]	Female	1980	70	69	85	96	89	47	38	44	
		1990	77	77	92	97	92	63	50	60	
		1998	81	81	95	98	94	75	58	72	
	Male	1980	83	83	95	99	90	73	64	66	
		1990	87	87	97	99	92	82	71	75	
		1998	89	89	98	99	93	87	76	81	
	Total	1980	77	76	90	97	89	60	52	55	
		1990	82	82	94	98	92	73	61	68	
		1998	85	85	97	99	94	81	67	76	
Adult literacy rate [% of people 15+]	Female	1980	54	52	57	92	77	28	25	28	
		1990	62	61	71	94	83	41	34	40	
		1998	68	67	78	95	87	52	41	51	
	Male	1980	72	71	80	97	82	56	52	49	
		1990	78	78	87	98	86	67	59	60	
		1998	82	82	91	98	89	74	65	68	
	Total	1980	63	62	69	94	80	42	39	38	
		1990	70	69	79	96	85	54	47	50	
		1998	75	74	84	96	88	63	53	59	
Gender Equality											
Gender equality in school [female gross enrolment ratio as a % of male gross enrolment ratio]	Primary	1980	87	84	87	99	97	74	67	76	
		1990	90	88	94	99	100 ^f	86	75	82	
			1994–1998 ^b	94	92	100	98	98 ^f	86	82	84
	Primary & Secondary	1990	„	„	88	93	98	82	75	82	
Gender equality in adult literacy [female literacy rate as a % of male literacy rate]			1980	75	73	71	95	94	50	48	57
			1990	79	78	82	96	97	61	58	67
			1998	83	82	86	97	98	70	63	75

		World total	Developing country total ^a	East Asia & Pacific	Eastern Europe and Central Asia	Latin America and Caribbean	Middle East & North Africa	South Asia	Sub Saharan Africa
Infant and Child Mortality									
Infant mortality rate	1980	80	87	55	41	61	95	119	115
[per 1,000 live births]	1990	60	65	40	28	41	60	87	101
	1998	54	59	35	22	31	45	75	92
Under-5 mortality rate	1980	123	135	82	..	78	136	180	188
[per 1,000 live births]	1990	87	91	55	34	49	71	121	155
	1998	75	79	43	26	38	55	89	151
Maternal Mortality									
Maternal mortality ratio	1990	430	480	210	95	190	320	610	980
[per 100,000 live births]									
Births attended by health staff	1990	..	49	58	..	..	58	39	..
[% of total]	1996–1998 ^b	52	47	..	92	78	62	29	38
Reproductive Health									
Contraceptive prevalence	1997–1998 ^b	49	48	52	67	59	55	49	21
[% of women 15–49]									
HIV prevalence^g	1999	1.1	..	0.07	0.14	..	0.13	..	8.0
[Percentage of adults (15–49 years) living with HIV/AIDS in 1999]									
Environment									
National strategies for sustainable development	1998	..	..	..	..	..	..	..	..
[countries with effective processes for sustainable development]									
Safe water [% of population with access]	Urban 1990–98 ^b	90	89	95	..	88	97	86	77
	Rural 1990–98 ^b	62	62	58	..	42	72	78	39
	Total 1990–98 ^b	72	72	69	..	78	85	80	50
Forest Area [% of National Surface Area]	1990	30	29	25	36	49	4	14	23
	1995 ^h	25	26	24	36	45	1	16	17
Biodiversity: land area protected [% of total land area]	1994 ^h	6.7	5.1	6.2	3.6	6.5	3.0	4.4	5.8
	1996 ^h	6.6	5.3	6.9	3.2	7.3	2.2	4.5	6.2
Energy efficiency: GDP per unit of energy use	1990	..	..	..	0.7	..	1.5	..	..
	1997	..	..	..	0.8	..	1.3	..	..
Industrial Carbon Dioxide emissions [tonnes per capita]	1980	3.4	1.5	1.4	..	2.4	3.0	0.4	0.9
	1990	3.3	1.7	2.0	..	2.2	3.3	0.7	0.9
	1996	4.0	2.5	2.7	7.4	2.5	3.9	0.9	0.8

			World total	Developing country total ^a	East Asia & Pacific	Eastern Europe and Central Asia	Latin America and Caribbean	Middle East & North Africa	South Asia	Sub Saharan Africa
General Indicators										
Life Expectancy at Birth [in years]	Female	1980	64	60	67 ^e	72	68	60	54	49
		1990	68	65	69	74	71	66	59	52
		1998	69	67	71	74	73	69	63	52
	Male	1980	59	56	64 ^e	63	62	57	54	46
		1990	63	62	66	65	65	63	59	49
		1998	65	63	67	65	67	66	62	49
	Total	1980	61	58	66 ^e	68	65	59	54	48
		1990	65	63	67	69	68	65	59	50
		1998	67	65	69	69	70	68	62	50
Fertility Rate [births per woman]	1980	3.7	4.1	3.0	2.5	4.1	6.2	5.3	6.6	
	1990	3.1	3.4	2.4	2.3	3.1	4.8	4.1	6.0	
	1998	2.7	2.9	2.1	1.6	2.7	3.5	3.4	5.4	
GNP per capita [Atlas method (current US\$)]	1980	2,530	790	330	..	2,110	2,040	270	650	
	1990	4,030	940	570	..	2,250	1,720	380	550	
	1998	4,890	1,250	990	2,200	3,860	2,030	430	510	

^a Combined figure for low and middle income countries used as a proxy for developing countries with the exception of the indicators for persistence to Grade 5, maternal mortality ratio and safe water where a true developing countries figure is used.

^b Data refer to the most recent year available within the specified period.

^c At 1993 purchasing power parities (PPPs) adjusted to current price terms.

^d The poverty gap is the mean shortfall below the poverty line (counting the non-poor as having zero shortfall), expressed as a percentage of the poverty line. The measure reflects the depth of poverty as well as its incidence.

^e Data are for nearest available year.

^f Figures are based on net enrolment ratios.

^g The indicator actually relates to HIV prevalence in 15 to 24 year old pregnant women. However, until satisfactory data coverage is achieved on this indicator, the prevalence of HIV infection in all adults will be used.

^h Data may refer to earlier years.

.. = Not available.

World Bank & UN Sources
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10/00 4K Produced for DFID Information Department
by Stairway Communications ISBN 1 86192 312 0