



Chapter

5

Options for Action

The year 2002 is the beginning of the fourth decade since the international community laid the foundation in 1972 for collective global action to mitigate adverse impacts on the environment. It finds one of the three pillars of sustainable development — the environment — seriously listing because of the distortions placed on it by the actions of a human population that now numbers more than 6 000 million. The importance of the environment is often underplayed even though its value to human survival and development is incalculable. The collapse of the environmental pillar is a serious possibility if action — from local to global — is not taken as a matter of urgency to address human impacts, which have left:

- increased pollutants in the atmosphere;
- vast areas of land resources degraded;
- depleted and degraded forests;
- biodiversity under threat;
- increasingly inadequate freshwater resources of deteriorating quality; and
- seriously depleted marine resources.

The environment is under siege. Unless both short- and long-term changes are instigated, sustainable development will remain a chimera — possibly only in the haze on a distant horizon. There is need for a balanced approach towards sustainable development. All three pillars — social, economic and environmental — are mutually supportive and all three are essential. Neglecting any one, and this is all too frequently the case with the environmental pillar, is not only shortsighted but leads to a policy dead end. The disintegration of the environmental pillar will lead to the inevitable collapse of the other, more charismatic pillars of sustainable development to which policy makers everywhere pay particular attention.

The future is now

The world is now split into the haves and the have-nots by four major divisions, all of which continue to widen. These divisions became evident in the *GEO-3* assessment and were addressed in the conclusions to Chapter 2. They are:

- the environmental divide;
- the policy divide;
- the vulnerability gap; and
- the lifestyle divide.

These four divisions are a serious threat to sustainable development. The environmental assessment in the preceding chapters shows that, despite increased awareness of the environment, efforts to stem deterioration have met with mixed results. There are notable successes and spectacular failures. Over the past three decades, massive investments of human and financial resources have been used to exploit the environment. On the other hand, research has opened up new frontiers in terms of humanity's understanding of the complex web of ecological processes.

Policies have been introduced to address many of the key issues. Targets have been set and met in some areas, such as the phase out of ozone-depleting substances, but success has been limited in others, for example the adoption of more stringent targets to reduce anthropogenic greenhouse gas emissions under the Kyoto Protocol. Many other initiatives critical to closing the lifestyle divide and the success of sustainable development have been identified. These include:

- *Alleviating poverty.* The international community has set a target of halving by 2015 the proportion of the world population (currently 22 per cent) which survives on less than US\$1 a day. The day-to-day lives of the majority of the poor are much more closely linked to the state of the environment than is the case for the better off — a healthy, productive environment is one of the few stepping stones out of poverty. As long as millions of the world's population remain poor, and the environment stays on the periphery of mainstream policy making, sustainable development will be an unachievable ideal.
- *Reducing the excessive consumption of the more affluent.* As long as the richest 20 per cent of the world population continues to account for 86 per cent of total personal consumption expenditure, it is unlikely that sustainable development will ever be achieved. The resulting pockets of wealth in a sea of poverty heighten tensions and overexploit resources.

- *Improving governance* has become a major issue, not only at the institutional and national levels, but also at the global level where disparities between North and South often fuel conflict and intransigence in negotiating policies for effective environmental management.
- *Providing adequate funding* for environmental programmes is a major factor. Inadequate resources have been blamed for the unsatisfactory implementation of *Agenda 21*, and inaction may ultimately undermine this blueprint for a sustainable future.
- *Eliminating debt*, particularly for the Highly Indebted Poor Countries, is also an important factor in a world in which debtor nations often use more foreign currency to repay debts than they earn. Indebtedness frequently leads to the overexploitation of the environment. As long as this situation is perpetuated, many of the debtor nations are unlikely to ever achieve sustainable development.

Many complex processes — social, economic and environmental — are at play in terms of greater impacts on people as a result of environmental change. Human vulnerability has been highlighted in Chapter 3, which emphasizes that everyone is at risk in one way or another to environmental change. The main difference is in coping capacity and ability to recover, and this difference means that the poor are generally more vulnerable. This vulnerability gap is undermining sustainable development. Human vulnerability to environmental change encompasses the quality of the environment, threats to that environment and the differing coping strategies of individuals and communities in any location, country or region. Closing the vulnerability gap would have a huge impact on the well-being and security of millions.

Reducing and eliminating poverty are inextricably linked with sound environmental management, which includes such issues as property and usage rights, the provision of basic services to protect the environmental asset base, adequate infrastructure, and funding for development and environment activities. One way forward here would be for donors to give direct support to community-based initiatives, especially those channelled towards sustainable development activities, through funding channels

accessible to low-income, disadvantaged and vulnerable groups.

Changes in consumption levels are needed by the more affluent individuals and nations of the world. Prosperity is closely linked to the ability to address environmental problems but it is also one of the forces behind excessive consumption, which is the cause of other problems with far-reaching impacts. Economic and political concerns have stalled attempts to change consumption patterns through new policies or instruments. A realization that changing consumption patterns does not have to curtail or prejudice quality of life, and can in fact do the opposite, must be brought home to the people concerned. There is sufficient evidence that this is the case but no coordinated effort to get the message across has yet been undertaken. Changing mindsets needs to go hand in hand with increased acceptance of responsibility for environmental and social impacts, and the creation of consumer ethics.

The provision of financial resources is insufficient in the absence of adequate capacity. Targeted capacity building and, more importantly, capacity mobilization and retention to minimize the brain drain are needed for more effective environmental governance and public participation. It is particularly important to ensure that capacity development is a shared experience rather than top-down or North-to-South instruction. With enhanced capacity, developing regions may be better able to cope with environmental change and disasters, which have increased their vulnerability.

The following are some of the additional environment-related challenges policy makers at all levels face over the coming decades:

- Large numbers of people, especially in developing countries, in both rural and urban areas, still lack access to clean water and adequate sanitation, good outdoor and indoor air quality, cleaner energy and waste management. This continues to lead to the degradation of the natural assets base, ill health and vulnerability to environmental threats.
- Unresolved conflicts remain over the ownership and management of common property resources (such as water, air, land, forests and oceans).
- Highly complex environmental issues which are not yet adequately addressed include the increasing prevalence of persistent toxic

substances, unsafe handling, disposal and dispersal of chemical and hazardous wastes, non-point pollution sources, management of transboundary river systems and shared water bodies, and excessive nitrogen loading.

- Climate change will cause inevitable damage in the medium and long term (low-lying islands and coastal areas, arid and semi-arid ecosystems, increased scale and intensity of environmental disasters). Developing countries, particularly Small Island Developing states, are the least able to adapt to events caused by climate change but are the most likely to be affected by them.
- The global environmental impact (ecological footprint) of the developed world and prosperous communities elsewhere is larger than that of the poor in the developing world but future economic development and population growth in the latter are likely to dramatically increase environmental impacts.

Role of information

Information is the foundation of sustainable development and is fundamental to successful planning and decision making. If decisions are made without sound data and information, they will be little better than best guesses and are likely to be wrong. Economic and social data are widely available and are relatively reliable and well understood. The situation with environmental data and information is somewhat different. High quality, comprehensive and timely information on the environment remains a scarce resource, and finding the 'right' information can pose problems: data are more difficult and expensive to obtain. It is also difficult to find indicators that capture and reflect the complexity of the environment and human vulnerability to environmental change. Environmental data acquisition remains a basic need in all countries.

Despite the problems, scientific consensus based on best available data and knowledge, although sometimes partial and limited, has proved a powerful tool for bringing environmental issues to international attention, and prompting action. There have been great improvements in environmental research and monitoring but it is important that these efforts are maintained and improved to ensure a flow of timely and reliable information. A sub-set of that information

needs to underpin early warning in relation to disasters and emerging issues, and to the factors underlying human vulnerability to environmental change.

The provision of information will benefit from:

- Structured and nested monitoring and observing systems including global satellites for collection of timely and reliable data on environmental components, using harmonized units of measurement and terms.
- An effective, globally acceptable environmental information system supported by a harmonized set of data, indicators and indices and closely integrated with socio-economic information systems to provide basic information for decision making.
- Maximizing the use of the Internet as a cheap and effective means of information exchange worldwide.
- Identifying indicators and indices to capture the sustainability of environmental trends as well as trends in human vulnerability to environmental change.
- Tools to create a knowledge base accessible to environmental policy and decision makers.
- Presentation of complex data and information in an easily understandable form to decision makers.

Changing policies and strengthening implementation

The following policy options, based on UNEP experience, the *GEO-3* assessment, and wide consultation with experts and stakeholders, provide a current perspective on initiatives needed now to set a sustainable course for the next 30 years and beyond. Action is needed at many levels. The suggestions for action that follow may be applicable to multiple or specific levels; they are intended as a check-list from which to make appropriate selections. The overriding need in policy development is to adopt a balanced approach towards sustainable development, giving adequate weight and strength to all three pillars; from the environmental perspective, this means mainstreaming the environment, bringing it in from the margins to the heart of development. How can this be achieved?

Rethinking institutions

Many environmental institutions were originally set up under different conditions and to perform different functions from those they are expected to exercise today. They now need to adapt to new roles and partnerships, especially in view of the development of multiple, nested levels of action from the global to the local, and the spread of responsibilities to civil society. Many institutions are constrained by a lack of human capacity and funding, despite increased environmental challenges, and this limits their effectiveness. These are clearly issues that need to be addressed if institutions are to fulfil their present obligations and confront emerging environmental issues.

What to aim for

- Reform, streamline and strengthen existing environmental institutions. Reforms should be directed towards creating flexibility, adaptability and adequate capacity.
- Reinforce the linkages between global and local levels, and ensure that implementation and capacity are passed on to local authorities wherever possible.
- Rationalize the range of environmentally related mandates among the many international organizations and conventions that result in overlap, duplication, poor assignment of responsibilities and difficulties in information sharing.
- Promote synergies between public institutions, think tanks and the private sector to facilitate the exchange of ideas, capacity and skills

Strengthening the policy cycle

The most successful environmental management approaches are based on policies that incorporate a range of tried and tested principles. Policy development processes for the environment need tightening to become more rigorous, systematic and integrated, turning out policies tailored for specific localities and situations. This implies a clearer understanding of the environmental implications of decision-making processes, better information on the quality of environmental management, the prioritization of issues, the setting of goals, targets and time frames, and the development of tools for monitoring progress and evaluating results.

Environmental policy development is a dynamic, iterative process encompassing assessment of the problems and options, target setting and policy formulation, followed by implementation, monitoring, review, evaluation, regular reassessment and adjustment. Without the complete cycle, it is not possible to determine if policies are having their intended effect or to make informed adjustments. Effective environmental policies form part of mainstream politics and should be incorporated into all political sectors and levels of government, especially into economic decision making. Effective national plans and sustainability strategies bring together governments, civil society and the private sector; they incorporate diverse initiatives such as ‘green’ and ‘brown’ agendas and country-specific best practices. Achieving this implies shifting the focus of policy from

Suggestions for Action

Improving policy performance monitoring

At the international level:

- Support the Global Reporting Initiative (GRI) and encourage more countries to join
- Support international efforts to improve compliance with MEAs and strengthen capacities to build effective national compliance regimes
- Strengthen regular dialogue between the international community and civil society through an open forum to discuss relevant environmental policy issues, share ideas and propose recommendations

Within civil society:

- Strengthen the existing monitoring of political will and performance, continue to raise awareness of environmental concerns and act as a ‘watchdog’ over the private sector, governments and international organizations
- Encourage individual responsibility and provide the missing link between people and policy development
- Support private sector initiatives on environmental performance standards and reporting, such as voluntary disclosure on progress in stemming pollution, protecting environmental assets and promoting sustainable development

environmental protection to the broader concept of sustainable resource management.

Providing an international policy framework

The fragmentation, duplication and overlap among international Multilateral Environmental Agreements (MEAs) reflects their piecemeal origin in response to each new problem. There are more meetings and reporting requirements than many governments can cope with or afford. Compliance rates are at best patchy. In the long term, a different approach aimed at building a coherent body of international environmental legislation is needed; meanwhile, short-term initiatives may help the system function more effectively.

Suggestions for Action

Strengthening international environmental legislation and compliance

- Increase information exchange to foster coordination between related agreements
- Hold joint meetings of the conferences of the Parties or the scientific advisory bodies of related MEAs, such as those for climate change and ozone
- Establish joint financial systems to cover various MEA provisions and integrate regional secretariats with a view to bringing related MEA secretariats under a uniform system
- Revitalize regional and global MEA mechanisms that have been beneficial in the past but have been sidelined
- Encourage NGOs, action groups, and regional and international organizations to promote conventions among their constituencies and leverage them effectively into policy
- Mandate UNEP to strengthen coordination of MEAs
- Establish a system of national reporting on international conventions to facilitate their close linkage to national policies and programmes
- Formulate transparent monitoring rules, procedures and regimes for the review and revision of commitments, conflict mediation and the provision of scientific, technical and economic advice upon request
- Assign shared but differentiated responsibilities and obligations under environmental agreements, whereby richer states are given greater responsibilities for action than poorer states
- Allow international and regional institutions to handle environmental disputes and encourage them to enforce sanctions against non-compliant parties to strengthen the effectiveness of international agreements
- Establish transparent and doable non-compliance procedures under existing MEAs

Using trade to the benefit of sustainable development

Western trade barriers restrict the ability of developing countries to grow economically and finance sustainable development expenditure. Global trade patterns and increasing globalization can threaten the environment but they can also provide mechanisms and incentives for sustainable development. The open market brings new opportunities for flows of capital, technology and labour to benefit developing countries. The danger of trade liberalization, however, is that environmental policies can be undermined and pollution havens created unless adequate checks and balances are in place.

Some form of sustainable trade is therefore needed. Sustainable trade is defined as an international exchange of goods and services that yields positive social, economic and environmental benefits, and reflects the core criteria of sustainable development. If trade, environment and development are to be brought together successfully, three critical needs must be addressed:

- the need for transparency;
- the need for equity and fairness — especially so that countries or stakeholders historically excluded from trade opportunities really benefit; and
- the need to ensure that social and environmental benefits provide lasting value for developing countries in terms of the capacity for innovation in the future.

Suggestions for Action

Changing trade patterns to benefit the environment

- Conduct research on issues such as the:
 - impacts of trade liberalization on environmental and human well-being
 - effects of environmentally and socially sustainable trade on communities and environments
- Build on the valuable lessons of prior experience such as those acquired since 1994 by the North American Commission for Environmental Cooperation which implements the environmental accord to NAFTA
- Strengthen the sustainable development emphasis of trade policies
- Prepare guidelines for export credit agencies

Harnessing technology for the environment

Promising new technologies can help to secure basic goods and services, especially for the poor in developing countries, but they remain largely the province of commercial interests in developed countries. Environmental technologies in water and energy (wind and solar power, fuel cells), recycling, biotechnology and ecological farming all offer great potential. Ways must be found to capitalize on these innovations, transfer the technologies to the needy at affordable cost and include them in the development of technologies. Developing countries must become ‘partners in the process’ of technology rather than ‘partners in the products’ of technology.

In spite of the enormous potential for environmental and social gains from new technology, there are certain risks that need to be managed. Methodologies and capacity to evaluate these risks, to establish ‘rules of conduct’ and to facilitate appropriate transfer provide the challenge. The precautionary approach, polluter and user pays principles, full information dissemination and disclosure of risks, technology impact assessment, and the cost benefit

analyses of adopting the technology must all be taken into account.

There are a number of ways forward:

- the creation of incentives using trade-related intellectual property rights (TRIPs);
- technology transfer to developing countries and poorer communities on preferential terms; and
- investment in alternative, relevant and more environmentally sound technologies, combining traditional and indigenous wisdom with cutting-edge science.

Making policy instruments and packages work for the environment

The backbone of national policy for the environment is legislation but other options are available. The most effective and appropriate policy packages incorporate a range of different policy tools and instruments.

Valuing environmental goods and services

When environmental goods and services are costed, rather than considered as free, there is an appreciation of the immense value of the environmental assets that underpin human well-being and security. This value is proportionally greater for the livelihoods, survival ability and resilience of the poorest and most marginalized communities. Valuing the environment is one way of raising the profile of the environment in the national policy arena. There have been numerous attempts to develop methods to assign a monetary value to environmental goods and services and the environmental impacts of economic activity. Such methods need further development and validation.

Technology transfer: lessons from the Montreal Protocol

Technology transfer has been successfully carried out through the Multilateral Fund of the Montreal Protocol. Analysis of case studies has demonstrated that:

- Technology transfer is a collaborative effort: active cooperation, partnership and synergy between all stakeholders are required
- The process cannot take place in isolation and requires a supportive environment with actions taken by government and industry, through a proper balance of incentives and disincentives
- Technology transfer needs to be consistent with national programmes
- Project planning should be comprehensive and geared to local conditions, requirements and capabilities of the receiving enterprises
- Market forces play a crucial role in affecting or facilitating the technology transfer process
- New technology should complement indigenous technologies where possible
- Training is essential
- Public awareness leads to public support
- Presentation of clear political guidelines is required

Suggestions for Action

Valuing the environment

- Refine and improve methods of calculating the economic value of environmental goods and services, and the environmental impacts of economic activity
- Evaluate environmental costs and benefits in all sectors of the economy to incorporate environmental accounting as standard practice in local or national accounting and at company level
- Support and encourage those involved in education and economics courses to incorporate tools and methods for environmental accounting into all curricula
- Consider environmental costs and benefits in policy development

Making the market work for sustainable development

A plethora of instruments exists that can make the market work for sustainable development, including tradable permit schemes, removing market barriers and environmentally damaging government subsidies, subsidizing the start-up of environmentally sound businesses, creating markets for environmental services, encouraging disclosure policies and recycling tax revenues. In the right context, market instruments can often be more effective than command-and-control measures. Furthermore, their flexibility encourages private sector innovation in ways that binding policies do not. The market is not very effective, however, in dealing with the long time horizons and uncertainty that characterize some environmental problems.

Suggestions for Action

Making the market work for sustainable development

- Promote tailored policies that combine market instruments with traditional command-and-control measures, such as internalizing environmental costs, introducing environmental taxes and removing perverse subsidies
- Build partnerships between government, industry and others to shape the markets for environmental goods and services, using tools such as legislation, incentives, market mechanisms and other methods of influencing market and consumer behaviour
- Analyse and reform market imbalances and imperfections, including decreasing the subsidies that allow prices to be held artificially below the costs of production and use for resources such as fuel, pesticides, water and electricity
- Develop more and better incentives to capitalize on 'win-win' situations, whereby both the economy and the environment benefit, such as:
 - increasing community benefits from environmental markets (e.g. fair trade)
 - introducing a public disclosure policy to reveal those most responsible for pollution — such as the publicly available pollutant release and transfer registries through which industries report emissions to air, water and land
- Promote the growing catalytic, cooperative role of governments (rather than the regulatory one) and encourage better national coordination between international trade decisions and environmental policy
- Bring 'green' goods and services to the market
- Take active measures to stimulate sustainable consumption and production practices
- Provide incentives for eco-efficient (cleaner) production and innovation

Voluntary initiatives

More attention should be paid to harnessing the potential of both voluntary action by individuals and formal voluntary initiatives in business. Voluntary initiatives are increasingly recognized by the private sector as a way of contributing to the environmental agenda and being seen to be 'green'. At the individual level, voluntary action is the foundation for many forms of environmentally responsible behaviour.

Suggestions for Action

Further voluntary action

- Encourage the further adoption of voluntary initiatives such as:
 - commitments by companies to achieve additional environmental targets
 - codes of conduct for sectoral industry associations regarding environmental responsibility
 - environmental performance targets agreed between government and a company or sector
 - legally binding covenants
- Support NGO-led voluntary initiatives such as:
 - environmental clean-up and recycling campaigns
 - tree planting
 - restoration of degraded areas

Policy performance monitoring

Governments are often good at adopting declarations and action plans but not at implementing them. The lack of political will, implementation, enforcement and compliance requires urgent action. Open processes of performance monitoring are often absent and the responsibilities for it at each level of governance unclear. NGOs play an essential role in independent review at national level, drawing attention to policy failures and poor performance. While specific criticisms may irritate those who are targeted, the existence of such public review provides a strong motivation for good performance. Its constructive role in the overall transparency and efficiency of the system should be acknowledged.

Shifting and sharing roles and responsibilities

The creative interaction of individuals and small units often provides efficient solutions to managing complicated and variable situations. Local responsiveness and adaptability are important. This approach can be applied at a variety of scales and has important implications for environmental management, suggesting the need to distribute roles and responsibilities in new ways.

The transfer of certain responsibilities through subsidiarity and decentralization is emerging as an effective way to ensure more timely policy development and implementation. Responsibility for many aspects of environmental and social health and safety lies at the local or municipal level, where action is crucial for poverty reduction, improving local environments and providing early warning on issues with current or potential national and international prominence. The effectiveness of devolving power to this level depends on the nature of participatory management systems of environmental governance, identifying all stakeholders and ensuring that they are ‘at the policy table’. Particularly in developing countries, providing for more meaningful participation

in environment and resource use decision-making, and giving all stakeholders the confidence that they can make a difference, will decrease mutual suspicion and enable major groups to participate in managing the shared environment on an equal footing.

Local action

The way that *Local Agenda 21* principles have been successfully embraced in both the developing and the industrialized world is a powerful encouragement for decentralization. However, decentralization to the municipal level has not always increased policy effectiveness, particularly in low and middle-income countries. This is because:

- local democracy is often lacking;
- responsibilities among different authorities overlap;
- power and control over resources are often retained by higher levels of government, including the ability to raise revenues; and
- local technical and institutional capacity is weak and affected by inefficient local governance.

Local measures are especially important to support the fight against poverty. As the scenarios in Chapter 4 have shown, the more desirable outcomes have involved rather than ignored individuals and local communities, which must be enabled to participate fully in decision-making affecting access to and management of common environmental assets and services. For this to happen, strong democratic local institutions are essential.

Suggestions for Action

Participatory management

- Develop strategic partnerships between governments, communities, the private sector and NGOs, particularly for advisory, implementation and funding activities, with clearly defined responsibilities assigned to the members
- Provide encouragement and opportunities to industry and the private sector to contribute further to developing and implementing sustainable development programmes
- Give civil society a more central role in environmental management by removing systemic barriers to participation, especially by women, indigenous peoples and youth, and give due attention to indigenous knowledge and coping strategies
- Improve institutional mechanisms for participation for stakeholders from civil society and the private sector
- Provide institutional legitimacy to community-based resource management practices by making communities part of the national legal and regulatory framework
- Give people a clear stake in the environment through legal and regulatory measures that define and recognize individual or community property and tenure rights
- Assign common but differentiated responsibilities to all involved

Ways to strengthen local action

- Integrate *Local Agenda 21s* into urban politics and policies while respecting their consultative and participatory nature
- Create awareness and ownership over the local environment (whether rural or urban) and its links to the global environment among the general public
- Create opportunities for public involvement in decision-making on local environmental issues, and support community rights to own and care for the land their members inhabit and the resources they use

Regional action

Regional levels of environmental policy development are also important, requiring the strengthening of regional bodies, initiatives, institutes and alliances. Strengthening regional level roles creates capacity for successful policy at an appropriate scale for many environmental processes and threats. In the inter-linked chain from local to global levels, regional blocks are becoming more important, new ones are being formed and stalled initiatives are being given new life. Increased attention is needed to develop regional level environmental policy, with a clear definition of responsibilities among local, national, regional and global institutions.

Global action

There is a growing range of global stakeholders including intergovernmental organizations, multinational corporations and international NGOs. Environmental NGOs are increasingly involved in international environmental governance, including the implementation of activities under the Global Environment Facility, the World Bank and regional development banks. This experience should be drawn on more extensively both in multi-stakeholder dialogues during international negotiations and in the implementation of international programmes.