Executive Summary

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The genes, species and ecosystems that comprise biological diversity provide resources and services that are essential to mankind. All sectors of world society affect this diversity to a greater or lesser extent, whether through direct exploitation of resources or the indirect impact of other activities. Different cultures and societies use, value, and protect these resources and services in a variety of ways. Their capacity to manage and benefit from biological diversity also varies considerably, because of location, state of development and differential access to the information and technology needed.

On 5 June 1992, at the Earth Summit in Rio de Janeiro, more than 150 states signed the Convention on Biological Diversity acknowledging the sustainable management of the world's living resources to be one of the most urgent issues of the modern era and expressing their commitment to address this collectively.

The treaty is a landmark in the international community's approach to environment and development as, unlike previous treaties focusing on a specific theme or sector, it adopts an holistic approach to the conservation and sustainable use of the Earth's entire wealth of living organisms.

The Convention recognizes the need for a multi-sectoral approach to ensure that biological diversity is conserved and used sustainably, the importance of sharing information and critical technologies, and the benefits that can accrue from use of biological resources.

Since the Convention on Biological Diversity was adopted in 1992, 180 countries and one regional economic integration organization have ratified or otherwise acceded to it, and it has become one of the most significant international agreements. It has resulted in major activity at both national and international levels, and in the increased coordination of cross-sectoral action within and between countries. It has also led to the release of substantial international funds to support developing countries and countries with economies in transition.

The *Global Biodiversity Outlook* is not a new assessment of the status and trends of global biodiversity, but draws on existing assessments in order to illustrate the urgency of the issues relating to the loss of biodiversity, and how the Convention – through implementation by Parties of its thematic and cross-cutting programmes of work and through cooperation with other bodies – seeks to address these issues, thereby providing a basis for sustainable development in all countries.

The concept of "biodiversity" and the importance of arresting its decline are ideas increasingly familiar to decision makers and those concerned with environmental issues. It is, however, much less clear to many people, not directly involved in the intergovernmental process or unfamiliar with the specialist literature, just how the international community sets about addressing these problems, and how international commitments can be turned into concrete action at all levels. The aim of the *Global Biodiversity Outlook* is to provide this overview, by focusing on the extent and effectiveness of responses adopted by the global community, and the measures being implemented at national and international levels in the context of the Convention.

The *Global Biodiversity Outlook* is a tool for use by Contracting Parties and other stakeholders to:

- Review progress made by the Convention toward its three objectives,
- Identify barriers to implementation,

- Help set priorities for implementation, and
- Communicate progress and advocate needs to decision makers.

The audience of the *Global Biodiversity Outlook* is principally the key players in implementation of the Convention, and other decision-makers and planners, in both the public and private sectors, who need to take account of the objectives and programmes of the Convention and the obligations on Parties, in such sectors as trade, finance, agriculture, fisheries and industry.

The Convention addresses biological diversity at the genetic level, the species level and the ecosystem level. Chapter 1 reviews the status and trends of biological diversity at these three levels. Human activity over the last ten thousand years has increased genetic diversity of domesticated crops and livestock. However, human activity has also reduced the abundance and distribution of species, resulting in loss of genetic diversity or genetic erosion. Modern biotechnology, in particular genetic engineering, offers the promise of benefits to human societies, but also poses potential risks to biological diversity.

To date, around 1.75 million species have been described and formally named, but there are good grounds for believing that many million more species exist that remain undiscovered and undescribed. Although estimates of the total number of species vary widely, a working estimate is around 14 million species.

Species are not evenly distributed over the planet and the single most obvious pattern in global biodiversity is that overall species richness tends to increase towards the equator.

Every species will become extinct at some point; virtually all species that have existed are extinct. In geological time, origination of species has proceeded at a higher rate than extinction of species, i.e. biodiversity has increased. However, in recent time, the known rate of extinction among mammals and birds is far higher than the estimated average rate through geological time. It is possible to estimate the relative risk of extinction among recent species on the basis of demography and distribution. All mammals and birds have been assessed for extinction risk: 24% of mammal species and 12% of birds are considered globally threatened.

The major ecosystems – marine and coastal areas, inland waters, forests, dry and sub-humid lands – all provide the goods and services without which life on earth would not be possible, and values and uses that sustain human societies. These ecological functions include the purification of air and water, the stabilisation and moderation of the Earth's climate, the renewal of soil fertility, the cycling of nutrients and the pollination of plants. From this complex web of interacting natural processes human societies derive the multiplicity of benefits that has guaranteed their survival and development throughout their history: water, food, shelter, fuel, clothing, medicines, building materials, aromatics, dyes, means of transport, power generation and a myriad of other benefits.

The rising levels of consumption of the components of biological diversity – as the human population has increased and as industrial production has expanded – is straining these natural processes to the limit. Major impacts on all ecosystems can be observed in all parts of the globe. The rates of erosion and loss of biodiversity are high and, in some cases, the situation is critical. At the global level, rising expectations and patterns of unsustainable consumption co-exist with unjustifiable levels of poverty. Unless both are addressed such that the use of the components of biological diversity becomes sustainable, biodiversity will continue to be lost.

Objectives of the Convention

- Conservation of biological diversity
- Sustainable use of components of biological diversity
- Fair and equitable sharing of the benefits arising out of the use of genetic resources

A central purpose of the Convention on Biological Diversity, as with Agenda 21, is to promote sustainable development, and the underlying principles of the Convention are consistent with those of the other "Rio Agreements". The Convention stresses that the conservation of biological diversity is a common concern of humankind, but recognizes that nations have sovereign rights over their own biological resources, and will need to address the overriding priorities of economic and social development and the eradication of poverty.

The Convention recognizes that the causes of the loss of biodiversity are diffuse in nature, and mostly arise as a secondary consequence of activities in economic sectors such as agriculture, forestry, fisheries, water supply, transportation, urban development, or energy, particularly activities that focus on deriving short-term benefits rather than long-term sustainability. Dealing with economic and institutional factors is therefore key to achieving the objectives of the Convention. Management objectives for biodiversity must incorporate the needs and concerns of the many stakeholders involved, from local communities upward.

A major innovation of the Convention is its recognition that all types of knowledge systems are relevant to its objectives. For the first time in an international legal instrument, the Convention recognises the importance of traditional knowledge – the wealth of knowledge, innovations and practices of indigenous and local communities that are relevant for the conservation and sustainable use of biological diversity. It calls for the wider application of such knowledge, with the approval and involvement of the holders, and establishes a framework to ensure that the holders share in any benefits that arise from the use of such traditional knowledge.

The Convention therefore places less emphasis on a traditional regulatory approach. Its provisions are expressed as overall goals and policies, with specific action for implementation to be developed in accordance with the circumstances and capabilities of each Party, rather than as hard and precise obligations. The Convention does not set any concrete targets, there are no lists, no annexes relating to sites or protected species, thus the responsibility of determining how most of its provisions are to be implemented at the national level falls to the individual Parties themselves.

Chapter 2 describes how the Convention was developed, how it works, and how it is implemented. It analyses the objectives and approach of the Convention, its institutional structure and decision-making process, the obligations on Parties, the need for mechanisms to assess implementation, and emphasizes the need for cooperation between all relevant actors and stakeholders at national, regional and global levels.

Since its first meeting in 1994, the Conference of the Parties has adopted over a hundred decisions. These recommend action that Parties, other agencies, the organs of the Convention (the Secretariat, the financial mechanism, the clearing-house mechanism), scientific, private sector and other non-governmental organizations should undertake to implement the various provisions of the Convention. Chapter 3 analyses these decisions and the

recommendations of the Convention's scientific body. It looks in particular at programmatic areas and cross-cutting issues, finance and other services in support of implementation (including the financial mechanism), and the role of the institutions of the Convention in implementation. It explains how the ecosystem approach is the primary framework for action under the Convention.

The thematic work programmes

- Marine and coastal biological diversity (the Jakarta Mandate)
- Forest biological diversity
- Inland water biological diversity
- Agricultural biological diversity
- Biological diversity of dry and sub-humid lands

The thematic work programmes on major ecosystem types establish basic principles for future work, set out key issues for consideration, identify potential outputs and suggest a timetable and ways and means of producing these outputs. Each programme requires contributions from Parties, the Secretariat and a range of relevant organizations. Addressing the cross-cutting issues constitutes the complex task of ensuring a holistic approach to implementation of the triple objectives of the Convention: conservation, sustainable use, and the sharing of benefits.

The cross-cutting issues

- Identification, monitoring and assessment, and indicators including the Global Taxonomy Initiative
- Knowledge, innovations and practices of indigenous and local communities
- Alien species
- Tourism
- Biodiversity and climate change
- Migratory species
- Incentive measures and economic valuation of biological diversity
- Public education and awareness
- Impact assessment, liability and redress
- Access to genetic resources

The Convention establishes mechanisms for implementation: a clearing-house mechanism for technical and scientific cooperation, a process of national reporting on measures taken for implementation of the Convention, and a financial mechanism to assist developing countries. The financial mechanism is operated by the Global Environment Facility. Additional financial resources need to be made available.

The Cartagena Protocol on Biosafety provides a legally binding framework for transboundary movements of living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity.

It is not yet possible to construct more than a partial picture of overall implementation at the national level. Many Parties have not provided information, either through national reports, case studies or other types of submissions. Chapter 4 reviews

implementation of the Convention at the national level, drawing on the first round of national reports, as well as case studies submitted by Parties to the Secretariat, biodiversity country studies and national biodiversity strategies and action plans.

Preliminary conclusions on national implementation point to:

- The ongoing preparation of national biodiversity strategies and action plans in most countries,
- Increasing efforts to reform institutional and legislative arrangements, with a view to integrating biodiversity issues into sectoral activities,
- Increased recognition of the importance of the identification and monitoring of biological diversity,
- Renewed emphasis on *in situ* conservation of biological diversity,
- Continuing requests for financial and technical assistance to complete the strategies and action plans and to focus on national and local implementation,
- Emerging interest among Parties in promoting regional cooperation for implementation of the Convention.

The Conference of the Parties has stressed the central importance of having a national biodiversity strategy and action plan as the cornerstone of national action to implement the Convention. However, in many cases the development of the national biodiversity strategy has been slower and more complex than anticipated. Following the first round of reporting in 1997-98, there is no comprehensive basis on which to answer the question "What do we know about progress, constraints, and emerging issues?" in implementing each of the objectives of the Convention – conservation, sustainable use, and benefit sharing.

For this reason the Conference of the Parties has adopted a new reporting format for future rounds of national reporting, designed to bring out information about all the measures Parties have been requested to take, deriving from the provisions of the Convention and from decisions of the Conference of the Parties. It is hoped that this will provide the comprehensive overview of progress, constraints and emerging issues on each aspect of implementation needed to allow a global analysis of the state of national implementation of the Convention. These second reports are due in 2001 and this analysis will form the central focus of the next edition of the *Global Biodiversity Outlook*.

Chapter 5 looks at global and regional trends in the implementation of the Convention, including a discussion of global and regional activities that support implementation of the Convention, and an overview of cooperation with other biodiversity-related conventions and processes, including scientific and technical cooperation.

The scope of the Convention means that its effective implementation will require cooperation and coordination with a wide range of other conventions, institutions and processes. Putting into practice the calls for cooperation made by the Conference of the Parties can be a difficult task. Each convention or agency has its own governing body that will normally need to approve new activities undertaken in response to calls from the Convention to cooperate. These activities are likely to have budgetary or staffing implications and may require changes in ongoing programmes and policies that themselves are often the outcome of protracted and perhaps difficult negotiations within those fora.

The fact that the governing bodies of these other conventions and agencies are composed of Governments, in the same way as the Conference of the Parties, should mean that consistency in decision-making under different instruments and institutions is relatively easy to arrive at. To some extent this is increasingly the case, as more Governments put in place procedures at national level to ensure that their delegations to meetings of different but related bodies present consistent and mutually reinforcing positions at each. However at least some governments still sometimes take inconsistent, even contradictory, positions at meetings of different bodies. In part this reflects differing political positions and priorities at the national level, which can only be resolved by the relevant national actors. Often, however, such divergent positions reflect a lack of coordination and sharing of information between the national lead agencies for the different instruments. The Conference of the Parties has requested Parties to promote consistency and coordination in negotiation and implementation. It has called upon national focal points to cooperate with the competent authorities of the Convention on Wetlands, CITES and the Convention on Migratory Species on the implementation of these conventions at the national level to avoid duplication of effort. It has also called upon Parties to coordinate their positions in both the FAO and the Convention.

The more that the relevant convention secretariats and international organizations are able to cooperate at the policy and operational levels, the better they will be able to assist member Governments in promoting such national level coordination for implementation. The results should be greater synergies between measures taken to implement more than one Convention and better integration of biodiversity considerations into other sectors, as required by the Convention.

Substantial work supporting the implementation of the objectives, articles and work programmes of the Convention is going on worldwide. Many of these projects and programmes were initiated by the Convention, but many more arose from existing initiatives or were started independently from the Convention process. The Convention has already played a role in coordinating biodiversity-related activities, for example through the Global Environment Facility as the main global funding mechanism for biodiversity.

Many initiatives in support of the Convention have gained in efficiency through regional cooperation. Regional strategies and action plans for the conservation and sustainable use of biological diversity, and for equitable benefit sharing are important mechanisms for achieving the Convention's objectives. The Conference of the Parties has emphasized the functions of sub-regional and regional processes in promoting implementation of the Convention at the regional, sub-regional and national levels. A key element is capacity development at regional and national levels.

Chapter 6 concludes that if there is a simple message to be heard from the experience of the first eight years it has two components – two sides of the same coin.

First, the nature and scope of the measures needed for implementing the Convention, which are themselves a reflection of the nature and scope of the underlying causes of biodiversity loss, require making complex and integrated policy choices that call for coordination, political will and active leadership at the national level.

Second, the Convention will only succeed if its importance is recognised in the wider context of economic development and global change, in particular by the international regimes on key issues such as trade, agriculture, and climate change. Unless these processes acknowledge the concerns of this Convention and its programmes for implementation, and actively take account of these in their own decision making and measures for implementation, the Convention is unlikely to succeed. In this case biodiversity, with all the social benefits and ecological services that derive from it, will continue to be lost.

The Conference of the Parties will consider a strategic plan for the Convention, comprising visionary but realistic goals for each of the three objectives of the Convention. Each operational goal will be supported by action plans designed to realise the goals in the period from 2002 to 2010.

The General Assembly of the United Nations has noted with concern that, despite the many successful and continuing efforts since the Stockholm Conference in 1972 and the fact that some progress has been achieved, the environment and natural resource base that support life on earth continue to deteriorate at an alarming rate.

The World Summit on Sustainable Development, to be held in Johannesburg in 2002, will bring the issues of sustainable development back onto the political agenda at the highest levels and, it is hoped, reinvigorate the global commitment to sustainable development.

The *Global Biodiversity Outlook* shows that the condition of biodiversity in the world's major ecosystems continues to deteriorate, almost without exception and often at an accelerating rate. Biological diversity provides the goods and services that make life on earth possible and satisfy the needs of human societies. The variability it represents constitutes a global life insurance policy.

This report represents an account of what has been achieved since the Convention was opened for signature in Rio during the United Nations Conference on Environment and Development. It points to some of the critical issues that have to be addressed if the Convention is to succeed in meeting its objectives.