

THE CONVENTION ON BIOLOGICAL DIVERSITY

INTRODUCTION

The Convention on Biological Diversity is probably the most all-encompassing international agreement ever adopted. It seeks to conserve the diversity of life on Earth at all levels – genetic, population, species, habitat, and ecosystem – and to ensure that this diversity continues to maintain the life support systems of the biosphere overall. It recognizes that setting social and economic goals for the use of biological resources and the benefits derived from genetic resources is central to the process of sustainable development, and that this in turn will support conservation.

Achieving the goals of the Convention will require progress on many fronts. Existing knowledge must be used more effectively; a deeper understanding of human ecology and environmental effects must be gained and communicated to those who can stimulate and shape policy change; environmentally more benign practices and technologies must be applied; and unprecedented technical and financial cooperation at international level is needed.

International environmental agreements

Throughout history human societies have established rules and customs to keep the use of natural resources within limits in order to avoid long-term damage to the resource. Aspects of biodiversity management have been on the international agenda for many years, although early international environmental treaties were primarily concerned with controlling the excess exploitation of particular species.

The origins of modern attempts to manage global biological diversity can be traced to the United Nations Conference on Human Environment held in Stockholm in 1972, which explicitly identified biodiversity conservation as a priority. The Action Plan in Programme Development and Priorities adopted in 1973 at the first session of the Governing Council of UNEP identified the “conservation of nature, wildlife and genetic resources” as a priority area. The international importance of conservation was confirmed by the adoption, in the same decade, of the Convention on Wetlands (1971), the World Heritage Convention (1972), the Convention on International Trade in Endangered Species (1973), and the Convention on Migratory Species (1979) as well as various regional conventions.

Making the connections

By the 1980s, however, it was becoming apparent that traditional conservation alone would not arrest the decline of biological diversity, and new approaches would be needed to address collective failure to manage the human environment and to achieve equitable human development. Important declarations throughout the 1980s, such as the World Conservation Strategy (1980) and the resolution of the General Assembly of the United Nations on the World Charter for Nature (1982), stressed the new challenges facing the global community. In 1983 the General Assembly of the United Nations approved the establishment of a special independent commission to report on environment and development issues, including proposed strategies for sustainable development. The 1987 report

of this World Commission on Environment and Development, entitled *Our Common Future* (also known as the *Brundtland Report*), argued that “the challenge of finding sustainable development paths ought to provide the impetus – indeed the imperative – for a renewed search for multilateral solutions and a restructured system of cooperation. These challenges cut across the divides of national sovereignty, of limited strategies for economic gain, and of separated disciplines of science.”

A growing consensus was emerging among scientists, policy-makers and the public, that the biosphere had to be seen as a single system, and that its conservation required multilateral action, since global environmental problems cannot by definition be addressed in isolation by individual States, or even by regional groupings.

By the end of the 1980s, international negotiations were under way that would lead to the United Nations Conference on Environment and Development (the “Earth Summit”, or UNCED), held in Rio de Janeiro in June 1992. At this pivotal meeting, Agenda 21 (the “Programme of Action for Sustainable Development”), the Rio Declaration on Environment and Development, and the Statement of Forest Principles were adopted, and both the United Nations Framework Convention on Climate Change and the Convention on Biological Diversity were opened for signature.

Financial resources for global environmental protection

During the same period there was an increasing interest in international mechanisms for environmental funding. With the debt crisis, commercial flows for development had become scarce, and the role of multilateral assistance had assumed greater importance in discussions on financial flows and debt rescheduling. Simultaneously, concern with new funding for environmental issues was growing – the Brundtland Report argued for a significant increase in financial support

from international sources; the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer established a financial mechanism to provide financial and technical assistance to eligible Parties for the phasing-out of chlorofluorocarbons (CFCs); and the concept of debt-for-nature swaps, that would promote “win-win” situations allowing developing countries to ease their debt burdens and finance environmental protection, was being examined.

A number of proposals for funds and mechanisms were made. Donor country readiness to increase the supply of funds was low and their willingness to support new international agencies even lower, but nevertheless recognition of the principle that additional environment-related funding would have to be provided to developing countries was emerging. During 1989 and 1990 discussions took place within the framework of the World Bank’s Development Committee on a new funding mechanism for the environment. At the end of 1990 agreement was reached on the establishment of the Global Environment Facility under a tripartite agreement between the World Bank, UNDP and UNEP. The GEF would be a pilot initiative for a three-year period (1991-1994) to promote international cooperation and to foster action to protect the global environment. The grants and concessional funds disbursed would complement traditional development assistance by covering the additional costs (also known as “agreed incremental costs”) incurred when a national, regional or global development project also targets global environmental objectives.

The GEF was given four focal areas, one of which was to be biological diversity.¹ One of the first initiatives taken under the pilot phase was to support preparation of Biodiversity Country Studies in twenty-four developing countries and countries in transition. The primary objective

¹The other three are climate change, international waters and depletion of the Earth’s ozone layer.

of the Biodiversity Country Studies was to gather and analyse the data required to drive forward the process of developing national strategies, plans, or programmes for the conservation and sustainable use of biological diversity and to integrate these activities with other relevant sectoral or cross-sectoral plans, programs, or policies. This anticipated the provisions of key articles of the Convention on Biological Diversity, in particular the requirements in Article 6 for each country to have a national biodiversity strategy and to integrate the conservation and sustainable use of biodiversity into all sectors of national planning and in Article 7 to identify components of biological diversity important for its conservation and sustainable use.

a regime that could ensure global conservation of biological diversity. On the other hand, it also concluded that the development of an umbrella agreement to absorb or consolidate existing conventions was legally and technically impossible. By 1990 the Group had reached a consensus on the need for a new global treaty on biological diversity, in the form of a framework treaty building on existing conventions.

The scope of such a convention was broadened to include all aspects of biological diversity, including *in situ* and *ex situ* conservation of wild and domesticated species, sustainable use of biological resources, access to genetic resources and to relevant technology, including biotechnology, access to benefits derived from such technology, safety of activities related to living modified organisms, and provision of new and additional financial support.

In February 1991 the Group of Experts became the *Intergovernmental Negotiating Committee for a Convention on Biological Diversity* (INC). The INC held seven negotiating sessions, aiming to have the Convention adopted in time for it to be signed by States at the Earth Summit in June 1992.

The relationship between the objectives of the Convention and issues relating to trade, to agriculture and to the emerging biotechnology sector were key issues in the minds of the negotiators. Part of the novelty of the Convention on Biological Diversity lies in the recognition that, to meet its objectives, the Convention would need to make sure that these objectives were acknowledged and taken account of by other key legal regimes. These included the trade regime that would enter into force in 1994 under the World Trade Organization; the FAO Global System on Plant Genetic Resources, in particular the International Undertaking on Plant Genetic Resources adopted in 1983; and the United Nations Convention on the Law of the Sea which was concluded in 1982 and would enter into force in 1994.

Madagascar

“More than 200,000 hectares of natural forests are burnt or cut down each year.”

The negotiation of the Convention on Biological Diversity

The World Conservation Union (IUCN) had been exploring the possibilities for a treaty on the conservation of natural resources, and between 1984 and 1989 had prepared successive drafts of articles for inclusion in a treaty. The IUCN draft articles concentrated on the global action needed to conserve biodiversity at the genetic, species and ecosystem levels, and focused on *in situ* conservation within and outside protected areas. It also included the provision of a funding mechanism to share the conservation burden between the North and the South.

In 1987 the Governing Council of UNEP established an *Ad Hoc Working Group of Experts* on Biological Diversity to investigate “the desirability and possible form of an umbrella convention to rationalise current activities in this field, and to address other areas which might fall under such a convention.”

The Group of Experts concluded that while existing global and regional conventions addressed different aspects of biological diversity, the specific focus and mandates of these conventions did not constitute

Panama

“Deforestation in Panama is at a rate of 5000 hectares per year. 35% of this is caused by conversion for agricultural use.”

Those involved in negotiating the Convention on Biological Diversity, as well as those involved in the parallel negotiations on the United Nations Framework Convention on Climate Change, were consciously developing a new generation of environmental conventions. These conventions recognized that the problems they sought to remedy arose from the collective impacts of the activities of many major economic sectors and from trends in global production and consumption. They also recognized that, to be effective, they would need to make sure that the biodiversity and climate change objectives were taken into account in national policies and planning in all sectors, national legislation and relevant international legal regimes, the operations of relevant economic sectors, and by citizens of all countries through enhanced understanding and behavioural changes.

The text of the Convention was adopted in Nairobi on 22 May 1992, and between 5 and 14 June 1992 the Convention was signed in Rio de Janeiro by the unprecedented number of 156 States and one regional economic integration organization (the European Community). The early entry into force of the Convention only 18 months later, on 29 December 1993, was equally unprecedented, and by August 2001 the Convention had 181 Contracting Parties (Annex 2 and Map 18).

THE OBJECTIVES AND APPROACH OF THE CONVENTION

The objectives of the Convention on Biological Diversity 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” (Article 1). These are translated into binding commitments in its normative provisions, contained in Articles 6 to 20.

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 and the Convention on Climate Change, 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 recognises 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

MAP 18

**Parties and signatories to the Convention on Biological Diversity**

This map shows which nations are full parties to the CBD, which are signatory only, and which are neither.

Source: data from CBD website, 6 August 2001.

Peru

“Estimates reveal that of the original 75 million hectares of forests, by 1990, 7 million had been deforested. At this rate by the year 2000, deforestation will affect about 9,559,817 hectares.”

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.

INSTITUTIONAL STRUCTURE OF THE CONVENTION

The Convention establishes the standard institutional elements of a modern environmental treaty: a governing body, the Conference of the Parties; a Secretariat; a scientific advisory body; a clearing-house mechanism and a financial mechanism. Collectively, these translate the general commitments of the Convention into binding norms or guidelines, and assist Parties with implementation. The roles of the institutions are summarised here and discussed in more detail in chapter 3.

Because the Convention is more than a framework treaty, many of its provisions require further collective elaboration in order to provide a clear set of norms to guide States and stakeholders in their management of biodiversity. Development of this normative basis centres around decisions of the *Conference of the Parties (COP)*, as the governing body of the Convention process. The principal function of the COP is to regularly review implementation of the Convention and to steer its development, including establishing such subsidiary bodies as may be required. The COP meets on a regular basis and held five meetings in the period 1994 to 2000. At its fifth meeting (2000) the COP decided that it would henceforth meet every two years.

The *Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)* is the principal subsidiary body of the COP. Its mandate is to provide assessments of the status of biological diversity, assessments of the types of measures taken in accordance with the provisions of the Convention, and advice on any questions that the COP may put to it. SBSTTA met five times in the period 1995 to 2000 and, in the future, will meet twice in each two-year period between meetings of the COP.

The principal functions of the *Secretariat* are to prepare for and service meetings of the COP and other subsidiary bodies of the Convention, and to coordinate with other relevant international bodies. The Secretariat is provided by UNEP and is located in Montreal, Canada.

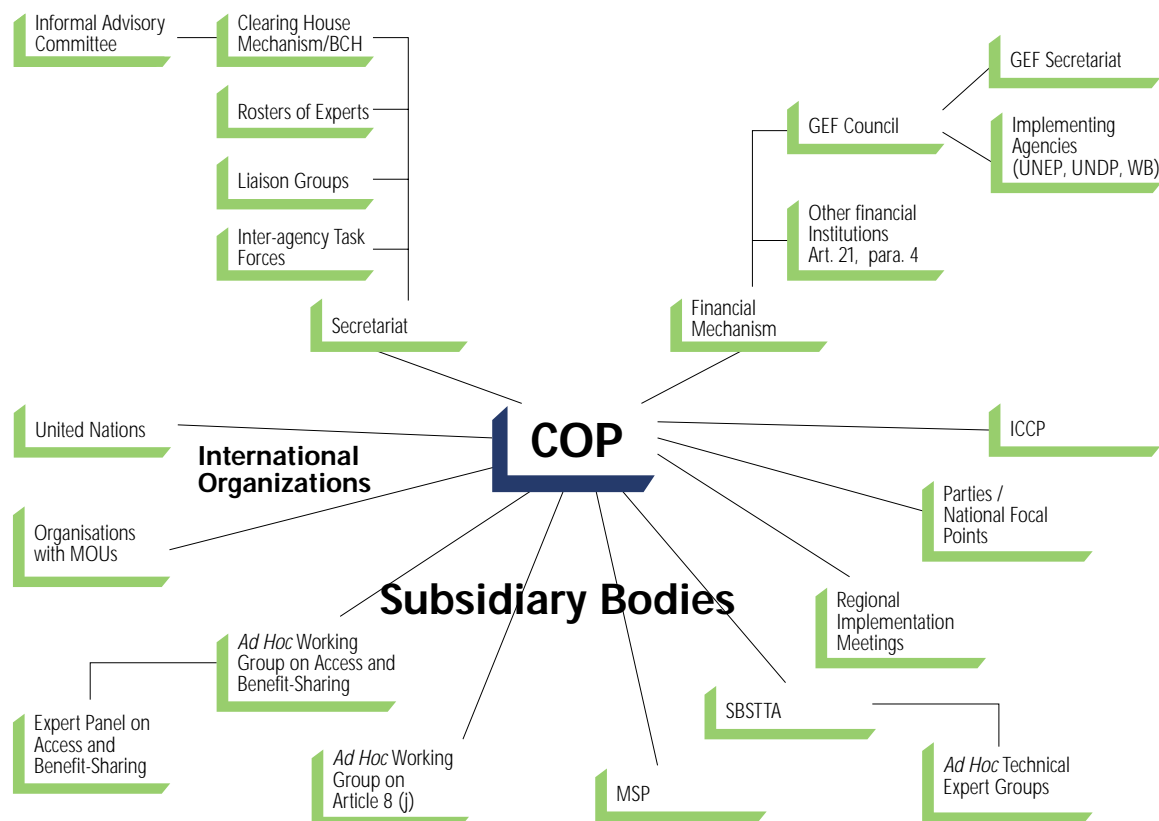
The Convention provides for the establishment of a *clearing-house mechanism* to promote and facilitate technical and scientific cooperation (Article 18). A pilot phase of the clearing-house mechanism took place from 1996 to 1998 and, following evaluation of this, the COP has approved a clearing-house mechanism strategic plan and a programme of work until 2004.

The Convention establishes a *financial mechanism* for the provision of resources to developing countries for the purposes of the Convention. The financial mechanism is operated by the Global Environment Facility (GEF) and functions under the authority and guidance of, and is accountable to, the COP. GEF activities are implemented by the United Nations Development Programme (UNDP), UNEP and the World Bank. Under the provisions of the Convention, developed country Parties undertake to provide "new and additional financial resources to enable developing country Parties to meet the agreed full incremental cost of implementing the obligations of the Convention" (Article 20) and, in addition to the provision of resources through the GEF, these Parties may also provide financial resources through bilateral and multilateral channels.

The COP is able, if it deems it necessary, to establish *intersessional bodies and meetings* to carry out work and provide advice between ordinary meetings of the COP. Those open-ended meetings that have been constituted so far include:

- *Open ended Ad Hoc Working Group on Biosafety (met six times from 1996-1999 – see below)*
- *Workshop on Traditional Knowledge and Biological Diversity (met in 1997)*
- *Intersessional Meeting on the Operations of the Convention (ISOC) (met in 1999)*
- *Ad Hoc Working Group on Article 8(j) and Related Provisions (met in 2000, will meet again in 2002)*
- *Ad Hoc Open-ended Working Group on Access and Benefit Sharing (will meet in 2001)*
- *Meeting on the Strategic Plan, National Reports and Implementation of the Convention (MSP) (will meet in 2001).*

Figure 2.1 Institutions of the Convention



Cartagena Protocol on Biosafety

The Convention requires the Parties to “consider the need for and modalities of a protocol setting out appropriate procedures, including, in particular, advance informed agreement, in the field of the safe transfer, handling and use of any living modified organism resulting from biotechnology that may have adverse effect on the conservation and sustainable use of biological diversity” (Article 19(3)).

At its second meeting, the COP established a negotiating process and an *Ad Hoc* Working Group on Biosafety that met six times between 1996 and 1999 to develop a draft protocol. The draft submitted by the Working Group was considered by an Extraordinary Meeting of the COP held in Cartagena, Colombia in February 1999 and in Montreal, Canada in January 2000, and on 29 January 2000 the text of the *Cartagena Protocol on Biosafety to the Convention on Biological Diversity* was adopted. The Protocol was opened for signature during the fifth meeting of the COP in May 2000 where it was signed by

68 States. The number of signatures had risen to 103 by 1 August 2001, and five States had ratified the Protocol. It will enter into force after the fiftieth ratification.

The COP will serve as the meeting of the Parties to the Protocol. The meetings will however be distinct, and only Parties to the Convention who are also Parties to the Protocol may take decisions under the Protocol (States that are not a Party to the Convention cannot become Party to the Protocol). Pending the entry into force of the Protocol, an *Intergovernmental Committee for the Cartagena Protocol (ICCP)* has been established to undertake the preparations necessary for the first meeting of the Parties. The first meeting of the Intergovernmental Committee was held in Montpellier, France in December 2000 and the second in Nairobi, Kenya in September-October 2001.

The following are the key steps in the decision-making process.

Identification The programme of work establishes a timetable indicating when the COP will consider in detail biological themes or ecosystems, or specific provisions of the Convention contained in the operative Articles. In addition to such ecosystem based programmes, the COP has addressed a number of key substantive issues in a broadly comprehensive manner. Such issues are collectively known as “cross-cutting issues”, and these have an important role to play in bringing cohesion to the work of the Convention by linking the thematic programmes.

Submissions and Compilation of Information The procedures by which the COP comes to adopt its decisions are broadly similar in each case. Firstly, current activities are reviewed to identify synergies and gaps within the existing institutional framework, or an overview of the state of knowledge on the issue under examination is developed. At the same time, Parties, international organizations, specialist scientific and non-governmental organizations are invited to provide information, such as reports or case studies. This review mechanism is coordinated by the Secretariat, supported in some cases by informal inter-agency task forces or liaison groups of experts.

Samoa

“Approximately one third (23,885 hectares) of the country’s forests were cleared between 1977 and 1990. In the last 5 years the rate of deforestation has been 3% per annum, one of the highest in the world.”

THE DECISION-MAKING PROCESS

The activities of the COP have been organized through programmes of work that identify the priorities for future periods. The first medium-term programme of work (1995 to 1997) saw a focus on developing the procedures and *modus operandi* of the institutions, determining priorities, supporting national biodiversity strategies, and developing guidance to the financial mechanism. At its fourth meeting, the COP adopted a programme of work for its fifth, sixth and seventh meetings (1999-2004), and, at its fifth meeting, approved a longer-term programme of work for SBSTTA, and began the development of a strategic plan for the Convention.

Slovakia

“It is assumed that as much as 90% of the territory of Slovakia was covered with woods before intensive human activities and interference into vegetation cover started. Since 1950, the area of forest land has been continuously increasing, by 12% in total. This increase was caused by the afforestation of less productive and infertile agricultural lands.”

Current ecosystem themes

- Marine and coastal biological diversity
- Forest biological diversity
- Biological diversity of inland water ecosystems
- Agricultural biological diversity
- Biological diversity of dry and sub-humid lands
- Mountain ecosystems (to be considered at COP-7 in 2004)

Current cross-cutting issues

- Identification, monitoring and assessment of biological diversity, and development of indicators
- Access to genetic resources
- Knowledge, innovations and practices of indigenous and local communities
- Sharing the benefits arising from the utilisation of genetic resources
- Intellectual property rights
- The need to address a general lack of taxonomic capacity worldwide
- Alien species that threaten ecosystems, habitats or species
- Sustainable use, including tourism
- Protected areas (to be considered at COP-7 in 2004)
- Transfer of technology and technology cooperation (to be considered at COP-7 in 2004).

Preparation of synthesis The Secretariat then prepares a preliminary synthesis of these submissions for consideration by SBSTTA. Where appropriate the Secretariat may use a liaison group to assist with this. In other cases SBSTTA may have established an *ad hoc* technical expert group, with members drawn from rosters of experts nominated by Parties, to assist with the preparation of the synthesis. Where

appropriate, the Secretariat may also identify relevant networks of experts and institutions, and coordinate their input to the preparation of the synthesis.

Scientific, Technical or Technological Advice On the basis of the work of the Secretariat, of any *ad hoc* technical expert group, and the findings of specialist meetings such as the Global Biodiversity Forum, SBSTTA will assess the status and trends of the biodiversity of the ecosystem in question or the relationship of the cross-cutting issue to the implementation of the Convention and develop its recommendation to the COP accordingly.

Supplementary Preparations for the COP The advice of SBSTTA may be complemented by the work of the Secretariat in the intersessional period between the meeting of the SBSTTA and that of the COP. Such work may comprise issues not within the mandate of the SBSTTA, such as financial and legal matters, development of guidance to the financial mechanism, or relations with other institutions and processes that could contribute to implementation of the future decision of the COP.

Programmes The COP considers the recommendations of the SBSTTA and any other advice put before it. It will then advise Parties on the steps they should take to address the issue, in light of their obligations under the Convention. It may also establish a process or programme to develop the issue further. Such a programme would establish goals and identify the expected outcomes, including a timetable for these and the means to achieve them. The types of output to be developed could include: guidelines, codes of conduct, manuals of best practice, guidance for the institutions of the Convention, criteria, and so forth. The programme would proceed to develop these products, under the guidance of SBSTTA, and report results to the COP for review.

OBLIGATIONS ON PARTIES TO THE CONVENTION

The Convention constitutes a framework for action that will take place mainly at the national level. It places few precise binding obligations upon Parties, but rather provides goals and guidelines, and these are further elaborated by decisions of the COP. Most of the commitments of Parties under the Convention are qualified, and their implementation will depend upon the particular national circumstances and priorities of individual Parties, and the resources available to them. Nevertheless, Parties are obliged to address the issues covered by the Convention, the chief of which are outlined in the following sections.

Article 6: National strategies and plans

The implementation of the Convention requires the mobilisation of both information and resources at the national level. As a first step, the Convention requires Parties to develop national strategies, plans or programmes for the conservation and sustainable use of biodiversity, or to adapt existing plans or programmes for this purpose (Article 6(a)). This may require a new planning process, or a review of existing environmental management or other national plans.

The Convention also requires Parties to integrate conservation and sustainable use of biodiversity into relevant sectoral or cross-sectoral plans, programmes and policies, as well as into national decision-making (Article 6(b)). This is clearly a more complex undertaking, requiring an assessment of the impacts of other sectors on biodiversity management. It will also require coordination among government departments or agencies. A national biodiversity planning process can identify the impacts and opportunities for integration.

National biodiversity strategies and action plans

For most Parties, developing a national biodiversity strategy will involve:

- establishing the institutional framework for developing the strategy, including designating leadership and ensuring a participative approach
- allocating or obtaining financial resources for the strategy process
- assessing the status of biological diversity within its jurisdiction
- articulating and debating the vision and goals for the strategy through a national dialogue with relevant stakeholders
- comparing the actual situation to the objectives and targets
- formulating options for action that cover key issues identified
- establishing criteria and priorities to help choose from among options
- matching actions and objectives

Developing and implementing national biodiversity action plans will involve:

- assigning roles and responsibilities
- agreeing the tools and approaches to be used
- establishing timeframes and deadlines for completion of tasks
- obtaining the budget
- agreeing indicators and measurable targets against which progress can be assessed
- determining reporting responsibilities, intervals and formats
- establishing procedures for incorporating lessons learned into the revision and updating of the strategy

Given the importance of stakeholder involvement in the implementation of the Convention, national planning processes should provide plenty of scope for public consultation and participation. The COP has recommended the guidance for the development of national strategies found in: *Guidelines for Preparation of Biodiversity Country Studies* (UNEP) and *National Biodiversity Planning: Guidelines Based on Early Country Experiences* (World Resources Institute, UNEP and IUCN). The financial mechanism has supported 125 countries in the preparation of their national biodiversity strategies and action plans (see chapter 3).

Article 7: Identification and monitoring of biodiversity

In contrast to some previous international or regional agreements on conservation, the Convention does not contain an internationally agreed list of species or habitats subject to special measures of protection. This is in line with the country-focused approach of the Convention. Instead, the Convention requires Parties to identify for themselves components of biodiversity important for conservation and sustainable use (Article 7).

Information provides the key for the implementation of the Convention, and Parties will require a minimum set of information in order to be able to identify national priorities. Whilst it contains no lists, the Convention does indicate, in Annex I, the types of species and ecosystems that Parties might consider for particular attention (see Box). Work is also under way within the Convention to elaborate Annex I in order to assist Parties further.

Indicative categories to guide Parties in the identification and monitoring of biodiversity

Ecosystems and habitats

- *with high diversity, large numbers of endemic or threatened species, or wilderness*
- *required by migratory species*
- *of social, economic, cultural or scientific importance*
- *representative, unique or associated with key evolutionary or other biological processes*

Species and communities

- *threatened*
- *wild relatives of domesticated or cultivated species*
- *of medicinal, agricultural or other economic value*
- *of social, scientific or cultural importance*
- *of importance for research into the conservation and sustainable use of biological diversity, such as indicator species*

Described genomes or genes of social, scientific or economic importance

Parties are also required to monitor important components of biodiversity, and to identify processes or activities likely to have adverse effects on biodiversity. The development of indicators may assist Parties in monitoring the status of biological diversity and the effects of measures taken for its conservation and sustainable use.

Spain

“Agriculture has claimed 39% of Spanish territory, most of which was forest in origin. Atmospheric contamination is responsible for the degradation of approximately 7% of forest cover, which shows 25% defoliation.”

Article 8: Conservation of biodiversity *in situ*

The Convention addresses both *in situ* and *ex situ* conservation, but the emphasis is on *in situ* measures, i.e. within ecosystems and natural habitats or, in the case of domesticated or cultivated species, in the surroundings where they have developed their distinctive properties. Article 8 sets out a comprehensive framework for *in situ* conservation and a Party's national biodiversity planning process should include consideration of the extent to which it currently addresses the following issues.

Protected areas Parties should establish a system of protected areas or areas where special measures are required to conserve biological diversity, covering both marine and terrestrial areas. They are expected to develop guidelines for the selection, establishment and management of these areas, and to enhance the protection of such areas by the environmentally sound and sustainable development of adjacent areas.

Regulation and management of biological resources Parties should regulate or manage important components of biological diversity whether found within protected areas or outside them. Legislation or other regulatory measures should therefore be introduced or maintained to promote the protection of ecosystems, natural and semi-natural habitats and the maintenance of viable populations of species in natural surroundings.

Regulation and management of activities Under Article 7 Parties should attempt to identify activities that may be detrimental to biological diversity. Where such activities have been identified, Parties should take steps to manage them so as to reduce their impacts.

Rehabilitation and restoration Parties should develop plans and management strategies for the rehabilitation and restoration of degraded ecosystems and the recovery of threatened species.

Alien species Parties should prevent the introduction of, and control or eradicate alien species which threaten ecosystems, habitats, or native species.

Living modified organisms Parties should establish or maintain means to manage the risks associated with the use and release of living modified organisms (LMOs) resulting from biotechnology. Parties are thus required to take action at the national level to ensure that LMOs do not cause adverse effects to biodiversity.

Traditional knowledge and practices The Convention recognizes that indigenous and local communities embodying traditional lifestyles have a crucial role to play in the conservation and sustainable use of biodiversity. It calls on Parties to respect, preserve and maintain the knowledge, innovations and practices of indigenous and local communities and to encourage their customary uses of biological resources compatible with the conservation and sustainable use of these resources. By this, the Convention acknowledges the significance of traditional knowledge and practices, which should be taken into account in the implementation of all aspects of the Convention.

Article 9: Conservation of biodiversity *ex situ*

While prioritising *in situ* conservation, the Convention recognizes the contribution that *ex situ* measures and facilities, such as gene banks, botanic gardens and zoos, can make to the conservation and sustainable use of biological diversity. It specifies that, where possible, facilities for *ex situ* conservation should be established and maintained in the country of origin of the genetic resources concerned.

The Convention does not, however, apply its provisions on access and benefit-sharing to *ex situ* resources collected prior to the entry into force of the Convention. This is of particular concern to developing countries, from which natural resources have already been removed and stored in *ex situ* collections, without a mechanism to ensure the sharing of benefits. The issue of the status of *ex situ* resources is currently being reviewed within the context of the work of the Food and Agriculture Organization of the United Nations.

Article 10: Sustainable use

Although the term conservation has sometimes been taken to incorporate sustainable use of resources, in the Convention the two terms appear side by side, and a specific Article of the Convention is devoted to sustainable use. This reflects the view of many countries during the negotiation of the Convention that the importance of sustainable use of resources be accorded explicit recognition. Sustainable use is defined in the Convention as:

“the use of components of biological diversity in a way and at a rate that does not lead to the long-term decline of biological diversity, thereby maintaining its potential to meet the needs and aspirations of present and future generations.”

The practical implications of this definition in terms of management are difficult to assess. Article 10 does not suggest quantitative methods for establishing the sustainability of use, but sets out five general areas of activity: the need to integrate conservation and sustainable use into national decision-making; to avoid or minimize adverse impacts on biological diversity; to protect and encourage customary uses of biodiversity in accordance with traditional cultural practices; to support local populations to develop and implement remedial action in degraded areas; and to encourage cooperation between its governmental authorities and its private sector in developing methods for sustainable use of biological resources.

Articles 11-14: Measures to promote conservation and sustainable use

The Convention makes explicit reference to a number of additional policy and procedural measures to promote conservation and sustainable use. For example, it requires Parties to adopt economically and socially sound incentives for this purpose (Article 11). It also recognizes the importance of public education and awareness to the effective implementation of the Convention (Article 13). Parties are therefore required to promote understanding of the importance of biodiversity conservation, and of the measures needed.

Research and training are critical to the implementation of almost every substantive obligation. Some deficit in human capacity exists in all countries, particularly so in developing countries. The Convention requires Parties to establish relevant scientific and technical training programmes, to promote research contributing to conservation and sustainable use, and to cooperate in using research results to develop and apply methods to achieve these goals (Article 12). Special

Switzerland

“75% of all standard orchards have disappeared within the last 40 years. Only 7% of the forests on the Plateau have not been exploited.”

attention must be given to supporting the research and training needs of developing countries, and this is explicitly linked to the provisions on access to and transfer of technology, technical and scientific cooperation and financial resources.

Parties are required to introduce appropriate environment impact assessment (EIA) procedures for projects likely to have significant adverse effects on biodiversity (Article 14). Legislation on EIA will generally incorporate a number of elements, including a threshold for determining when an EIA will be required, procedural requirements for carrying it out, and the requirement that the assessment be taken into account when determining whether the project should proceed. In addition, Parties are required to consult with other States on activities under their jurisdiction and control that may adversely affect the biodiversity of other States, or areas beyond national jurisdiction.

Articles 15-21: Benefits

The Convention provides for scientific and technical cooperation to support the conservation and sustainable use of biological diversity, and a clearing-house mechanism is being developed to promote and facilitate this cooperation. The provisions on scientific and technical cooperation provide a basis for capacity-building activities. For example, the COP has requested the financial mechanism to support a *Global Taxonomy Initiative* designed, among other things, to develop national, regional and sub-regional training programmes, and to strengthen reference collections in countries of origin. In addition to general provisions on cooperation, research and training, the Convention includes articles promoting access to the potential benefits resulting from the use of genetic resources, access to and transfer of relevant technology, and access to increased financial resources.

The potential benefits for developing country Parties under the Convention arise from the new position on conservation negotiated between developed and developing countries. The extent to which these benefits materialise is likely to be crucial to determining the long-term success of the Convention. Global biodiversity increases toward the tropics, and the Convention gives developing countries, in this zone and elsewhere, an opportunity to derive financial and technical benefits from their biological resources, while the world overall benefits from the goods and services that the biodiversity thus conserved will continue to provide.

Access to genetic resources and benefit-sharing Before the negotiation of the Convention, genetic resources were considered to be freely available, despite their potential monetary value. However, the approach taken in the Convention is radically different. Article 15 reaffirms the sovereignty of Parties over their genetic resources, and recognizes the authority of States to determine access to those resources. While the Convention addresses sovereignty over resources, it does not address their *ownership*, which remains to be determined at national level in accordance with national legislation or practice.

Although the sovereign rights of States over their genetic resources is emphasised, access to genetic resources for environmentally sound uses by scientific and commercial institutions under the jurisdiction of other Parties is to be facilitated. Since genetic resources are no longer regarded as freely available, the Convention paves the way for new types of regimes governing the relationship between providers and users of genetic resources.

Syria

“By 1997, 200 thousand hectares of the country have been afforested or 1.06% of the total area of the country. Only 233 thousand hectares is covered with natural forest.”

Key elements in genetic resource use agreements

- the need to obtain the *prior informed consent* of the country of origin before obtaining access to resources
- the need for *mutually agreed terms* of access with the country of origin (and potentially with direct providers of genetic resources such as individual holders or local communities)
- the importance of *benefit-sharing*; the obligation to share, in a fair and equitable way, benefits arising from the use of genetic resources with the Party that provides those resources

It is generally agreed that benefit-sharing should extend not only to the government of the country of origin but also to indigenous and local communities directly responsible for the conservation and sustainable use of the genetic resources in question. National legislation might require bio-prospectors to agree terms with such communities for the use of resources, and this may be all the more crucial where bio-prospectors are seeking to draw upon not only the resources themselves, but also upon the knowledge of these communities about those resources and their potential use.

Access to and transfer of technologies Under Article 16 of the Convention, Parties agree to share technologies relevant to the conservation of biological diversity and the sustainable use of its components, and also technologies that make use of genetic resources. Technology transfer under the Convention therefore incorporates both “traditional” technologies and biotechnology.

Biotechnology is defined in the Convention as: any technological application that uses biological systems, living organisms, or derivatives thereof, to make or modify products or processes for specific use.

Technologies which make use of genetic resources are subject to special provisions aimed at allowing the country of origin of the resources to share in the benefits arising out of the development of these technologies. The Convention makes it a specific requirement that all Parties create a legislative, administrative or policy framework with the aim that such technologies are transferred, on mutually agreed terms, to those providing the genetic resources. This obligation extends to technology protected by patents and other intellectual property rights.

More generally, developing country Parties are to have access to technology under terms which are fair and most favourable, including on concessional and preferential terms, where mutually agreed. Article 16 provides that where relevant technology is subject to an intellectual property right such as a patent, the transfer must be on terms which recognize and are consistent with the adequate and effective protection of the property right. However, it also goes on to provide that Parties are to cooperate in ensuring that intellectual property rights are supportive of, and do not run counter to, the objectives of the Convention.

Financial resources All Parties undertake to provide financial support and incentives for implementation of the Convention at the national level, in accordance with their capabilities. In addition, developed country Parties agree to make available to developing country Parties, new and additional financial resources to meet “the agreed full incremental costs” of implementing measures to fulfil their obligations.

In addition to the financial mechanism mentioned earlier, developed country Parties may provide resources to improve implementation of the Convention through overseas development agencies and other bilateral channels.

The Convention explicitly recognizes that the extent to which developing country Parties will be able to implement their obligations under the Convention will depend on the developed country Parties fulfilling their obligations to provide resources. The Convention also acknowledges that economic and social development remains the overriding priority of developing countries, and in this regard recognizes the special circumstances and needs of the small island developing States. As a result of both these considerations, developed country Parties are expected to give due consideration to the dependence on, distribution and location of biological diversity within developing countries, in particular small island States and those that are most environmentally vulnerable, such as those with arid and semi-arid zones, coastal and mountainous areas.

ASSESSING IMPLEMENTATION OF THE CONVENTION

The Convention provides for Parties to present reports to the COP on measures taken to implement the provisions of the Convention and their effectiveness in meeting the objectives of the Convention (Article 26). At its second meeting, the COP decided that the first national reports should focus on implementation of Article 6 of the Convention. This article concerns the need to develop a national biodiversity strategy and action plan, and to ensure that the conservation and sustainable use of biological diversity is integrated with the policies and programmes of other sectors. The information in these reports was considered by the fourth meeting of the COP, which asked SBSTTA to give advice on the nature of the information

required from Parties in order to assess the state of implementation of the Convention. A review of national implementation based on the information in the first national reports is contained in chapter 4.

At its fifth meeting, the COP adopted a methodology for national reporting that will enable Parties to provide information on the implementation of all their obligations, as derived from the articles of the Convention and from decisions of the COP that call for action by Parties. The reporting guidelines will permit Parties to consider the effectiveness of the measures taken and to identify national priorities, national capacity for implementation and constraints encountered. The COP will be able to identify issues that require further scientific or technical investigation, and to identify successes and constraints faced by Parties. In the latter case it will be better placed to decide what steps are necessary to support Parties, and to give appropriate guidance to the financial mechanism, institutions able to assist with capacity development, the Secretariat and to the Parties themselves.

COOPERATION

Given the enormous breadth of the issues that the Convention seeks to address, there is need not only for cooperation between Parties, but also to develop institutional links and cooperative relationships with other international bodies. Mechanisms for coordinating these relationships are fundamental to the implementation of the Convention. Each meeting of the COP has reaffirmed the importance it attaches to cooperation and coordination between the Convention and other relevant conventions, institutions and processes, and has invited these to take an active role in the implementation of aspects of the Convention.

Thailand

“54% of Thailand was covered by forest in 1960, however this figure had declined to 26% by 1992.”

Equally importantly, the COP has reaffirmed the importance of the role to be played by groups other than States and international bodies. Non-state actors – national and international non-governmental organizations, scientific bodies, industrial and agricultural associations, and indigenous peoples' organizations, amongst others – have all been called upon to cooperate in scientific assessments, policy development, and implementation of the Convention's work programmes. In particular, as traditional knowledge about conserving and sustainably using biodiversity is central to the development and implementation of the work programmes, cooperation with the holders of traditional knowledge has been particularly emphasized.

The institutional structure of the Convention thus extends beyond those institutions established by the process itself. Cooperation is discussed in chapter 5.