

## CONVENTION ON BIOLOGICAL DIVERSITY AND ITS PROTOCOL ON BIOSAFETY

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### **Biodiversity and the Human Environment**

Biodiversity refers to the infinite variety of life forms; genetic diversity – variation of genes within individual species, species diversity – variety of species in flora and fauna, and ecosystem diversity – variety of ecosystems, such as rainforests, coral reefs and deserts, that exist on our planet. This biological diversity is the *sine qua non* for the resilience of ecosystems and life forms and their ability to prevent and to recover from disasters and adverse conditions. Activities of microbial and animal species lead to soil creation, the maintenance of its quality and detoxification and decomposition of wastes. Appropriate plant cover can prevent catastrophic inundations, landslides and avalanches, mitigates soil erosion, and contributes to air and water quality, as well as to climate stabilization. The maintenance of species diversity facilitates natural pest control, pollination, crop production and food security. Furthermore, biological diversity plays an important role in the spiritual and cultural life of human societies.

The 1992 Convention on Biological Diversity (CBD) was developed and adopted in the context of an already relatively well developed legal framework for biodiversity conservation. The worthiness of certain species and ecosystems for protection has been recognized in international law already since the nineteenth century. While the majority of the early treaties on species protection were the result of human concern for their continued pursuit of economic interests, from the beginning of the twentieth century, treaties started to focus more and more on species protection for the sake of wildlife and ecosystem preservation *per se*. The 1972 United Nations Conference on the Human Environment, which took place in Stockholm, provided international biodiversity protection regulation with an additional stimulus. The Conference Declaration, which recognizes the power of humankind to transform its environment, called in its Principle 2 for the safeguarding of the “natural resources of the earth, including the air, water, land, flora and fauna and especially representative samples of natural ecosystems” for the benefit of present and future generations.

A series of universal and regional, as well as species and ecosystem specific conventions concerning the protection of nature and wildlife have been adopted since the Stockholm Conference, such as the 1972 Convention concerning the Protection of World Cultural and Natural Heritage, the 1973 Convention on International Trade in Endangered Species (CITES), the 1976 Convention on the Conservation of Nature in the South Pacific, the 1978 Amazonian Treaty, the 1979 Berne Convention on the Conservation of European Wildlife and their Natural Habitats, the 1991 Convention on the Protection of the Alps and the 1994 International Tropic Timber Agreement, to name just a few. In recent decades, new focus areas for international biodiversity regulation have emerged; the economic value of biological resources for healthcare and agriculture, as well as the development of new crops and new forms of medical treatment through genetic engineering.

## Negotiating a Universal Legal Framework

The conceptual design of the CBD started with an analysis of “technical, legal, economic and financial matters relating to the conservation, accessibility and use of [genetic] resources” by the Secretariat of the International Union for Conservation of Nature (IUCN) in implementation of the World Conservation Strategy, which had been launched in 1980 by IUCN in cooperation with the United Nations Environment Program (UNEP), the World Wildlife Fund (WWF), the Food and Agriculture Organization (FAO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) (IUCN General Assembly resolution 15/10, Christchurch, New Zealand, 1981). When a first draft for a convention on *in situ* conservation of flora and fauna was circulated by the IUCN to Governments and non-governmental organizations, UNEP and a number of States became interested in the idea of developing a universal biodiversity convention.

In 1987, the World Commission on Environment and Development (WCED) issued its report “Our Common Future”, better known as the Brundtland Report, named after the Commission’s Chair, Norwegian Prime Minister Gro Harlem Brundtland. The report highlights the importance of integrating both economics and ecology into decision-making and of conserving the sum and variety of species on Earth for economic, environmental and sustainable development reasons. It proposes a species protection convention as a first priority to counteract the problem of disappearing species and threatened ecosystems (WCED, *Our Common Future*, chapter 6.VI.2). At the 14th UNEP Governing Council meeting, which took place one month after the report’s publication, it was the United States who arrived with an initiative calling for work on a global convention on biological diversity. In contrast to the IUCN draft, which promoted *in situ* conservation, the objective of the United States’ initiative was to streamline existing international conservation agreements and their secretariats bringing them together under one umbrella convention. The Governing Council decided to set up an *Ad hoc* Group of Experts on Biological Diversity and charged the group “with investigating the desirability and possible form of an umbrella convention” (UNEP GC decision 14/26). At its 15th session in May 1989, the Governing Council authorized the Executive Director to start work on an international legal document which would address conservation questions as well as social and economic aspects of biological diversity. A second working group, the *Ad hoc* Working Group of Legal and Technical Experts was set up to carry out the task. The already existing Group of Experts was asked to hold further sessions and to provide the scientific basis for the negotiations (UNEP GC decision 15/34). The Group of Experts met three times between November 1988 and July 1990. The Group of Legal and Technical Experts met three times between November 1990 and July 1991, before, in an act of paying due credit to the process, it was renamed as the Intergovernmental Negotiating Committee (INC) for a Convention on Biological Diversity. Under this name, the group held another four meetings until the convention text was finally agreed upon on 23 May 1992 – virtually on the eve of the United Nations Conference on Environment and Development, which took place in Rio de Janeiro, 3-14 June 1992. Since the beginning of preparations for the Conference, a legally binding convention on biodiversity was envisaged as its key output. This provided a sense of urgency and an important impetus for the successful conclusion of the negotiations in time, and against the strategy of the Convention’s critics to try to drag out negotiations of the CBD beyond the Conference with a view that it might eventually disappear again from the international policy agenda.

The focus of the negotiations very quickly moved away from trying to establish an umbrella convention that would streamline existing agreements, as proposed by the United States, and from the concept of a convention that would merely focus on *in situ* conservation, as initially proposed by IUCN, towards developing a general treaty on biodiversity. Once it became clear that the majority of States wanted a convention that would include not only conservation but also social and economic aspects of biodiversity as well as the issue of biotechnology, the initial State sponsor of the process, the United States, turned into one of its most vocal opponents. Being one of the most important exporting countries, the United States was particularly concerned about including any provision relating to the development, management, safe use and release of genetically modified organisms, and about the protection of intellectual property rights, and opposed the inclusion of prior informed consent requirements in the context of exporting biotechnology or its products. The position of opposing prior informed consent requirements was also supported by Japan. On the other side stood the developing countries; since most of the genetic resources which are the raw materials for biotechnology in agriculture and pharmaceuticals are located in their territories, they made clear that they would oppose any new convention if biotechnology was not included. They favoured a convention that would be based on national (rather than international) action and wanted an emphasis on national sovereignty rights over biological resources. Focus on national action was also supported by a large number of developed countries, notably the United Kingdom. The most difficult item of the negotiations, however, turned out to be finding an agreement on the financial mechanism. While developed countries insisted on utilizing the Global Environmental Facility (GEF), developing countries viewed this mechanism as too donor country defined, and favored the establishment of a new structure. In the final hours of the negotiation process, a compromise clause was agreed upon and integrated as article 39, assigning the mandate of financial mechanisms to the GEF on an interim basis. Its governance system has in the meantime been restructured, and the GEF has so far been retained as the Convention's financial mechanism.

A novelty of the negotiation process was the inclusion of non-governmental organization (NGO) representatives in national negotiation teams, in particular on the North American and European teams. In addition, NGOs were allowed to be present at the Working Group and Plenary meetings. This can be seen as recognition of the expertise in environment and development issues that rests with certain specialized NGOs.

### **The Convention on Biological Diversity and its Objectives**

The Convention on Biological Diversity (CBD) was opened for signature at the United Nations Conference on Environment and Development in June 1992. The CBD goes well beyond a mere conservation treaty and beyond the scope of traditional environmental treaties. It is a process-oriented sustainable development convention, which takes account of economic interests and considerations of equity. Its main objectives, as spelled out in article 1, 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 utilization of genetic resources”.

States, in accordance with their particular conditions and capabilities, are under the obligation to develop national strategies, plans and programs – and as far as possible adopt measures that act as incentives – for the conservation and sustainable use of biological diversity. They are to identify and monitor the components of biological diversity

(ecosystems, species, genomes and genes) that are important for its conservation and sustainable use, and maintain relevant data. Processes and activities, which might have adverse impacts on conservation and sustainable use, are to be identified and their effects monitored through sampling and other techniques. The Convention promotes *in situ* conservation as well as *ex situ* conservation; the latter is to complement *in situ* conservation, and shall preferably be carried out in the country of origin of the biodiversity components (articles 6-11). In addition to national activities, States are under the obligation to cooperate, as appropriate, directly or through competent international organizations, in particular with respect to providing financing and other support for conservation activities in developing countries, technical and scientific cooperation, education, training and public awareness programs, as well as concerning notification and exchange of information in case of activities likely to cause significant adverse effects, situations of imminent or grave danger and arrangements for emergency responses (articles 5 and 12-14). A clearing-house mechanism to facilitate technical and scientific cooperation has been established by the Conference of Parties; it consists of the CBD website and its information centre, a network of national clearing-house mechanisms and additional partner institutions (article 18). Parties are furthermore under the obligation, to establish, as far as possible and as appropriate, procedures for environmental impact assessment which allow, where appropriate, for public participation in the process (article 14).

With a view to achieving fair and equitable sharing of the benefits of utilization of genetic resources, the Convention encourages access to genetic resources on mutually agreed terms and subject to prior informed consent of the party that provides such resources, as well as participation of the providing party in related scientific research. Access to and transfer of technologies to developing countries shall be provided and/or facilitated under fair and most favourable terms, and States are to take legislative and administrative steps to ensure that the private sector participates in these activities (articles 15-16). Highlighting the problematic nature of the relationship between intellectual property rights and technology transfer obligations in the context of regulating the conservation and sustainable use of genetic resources, article 16, paragraph 2, provides that access to and transfer of technology subject to patents and other intellectual property rights shall be consistent with adequate protection of such rights. The nature of the intellectual property rights and the right holders are not further defined by the Convention. This has raised questions about the relationship between the CBD and the World Trade Organization (WTO) Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS) adopted in 1994. The latter is designed to protect formal knowledge, but is unsuitable to protect traditional community knowledge, which does not fulfil the patent rights' requirements of novelty. The TRIPS Agreement does, however, allow WTO members to exclude from patentability "inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment" (article 27 TRIPS).

With respect to biotechnology, article 19 envisages that those States which provide genetic resources shall have the opportunity to participate in research activities and that priority access on a fair and equitable basis to the results and benefits arising from these biotechnologies shall be promoted for the providing States, especially for developing countries. The article also provides for the future establishment of a protocol on biosafety, which was ultimately adopted in 2000 (see below). In order to assist the parties with the implementation of the access and benefit-sharing provisions of the Convention an *Ad hoc* Open-ended Working Group on Access and Benefit-sharing was set up by the parties in

2000 (COP decision V/26). Four years later, the Working Group was given a new mandate. Based on the Plan of Implementation of the World Summit on Sustainable Development (2002), the Working Group was asked to negotiate an international regime on access to genetic resources and benefit-sharing in cooperation with the *Ad hoc* Working Group on article 8 (j) to ensure the respect of knowledge, innovations and practices of indigenous and local communities. The international regime is expected to be presented at the tenth meeting of the Conference of Parties in 2010.

The Convention is remarkable in its focus on promoting implementation through the provision of incentives to participate to the Contracting parties. It balances interests of different States and State groups, on the one hand, by facilitating access to genetic resources, and, on the other hand, by recognizing sovereign rights over natural resources and the special situation of developing countries, and by promoting cooperation in research and scientific activities, as well as by offering additional financial resources to meet the incremental costs of implementation (preamble, articles 3, 20 and 21).

### **Convention Bodies**

The Convention establishes a Conference of Parties (COP), a Secretariat and a Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA). The primary task of the COP is to review implementation of the Convention; for this purpose the COP reviews scientific, technical and technological advice, considers the national reports on implementation progress submitted to it by the parties, and adopts protocols, amendments and annexes as required. It can further establish subsidiary bodies and working groups, and contacts, through the Secretariat, the executive bodies of conventions dealing with biodiversity issues with a view to establishing cooperation (articles 23 and 26). The SBSTTA, is a multidisciplinary body open to all Contracting parties, which provides scientific and technical assessments of the status of biodiversity, prepares assessments on the effects of adopted measures, identifies innovative, efficient and state-of-the-art technologies and know-how, provides advice on scientific programmes and responds to any questions the COP and its subsidiary bodies might have (article 25). The COP has established a number of working groups, among them the Working Group on the Review of Implementation, the Working Group on Access and Benefit-sharing, the Working Group on Protected Areas, and the Working Group on article 8 (j). The latter deals with aspects that relate to knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles that are relevant for the conservation and use of biological diversity and with the question of how to promote their wider application.

Disputes concerning interpretation and application of the Convention are to be resolved by negotiation; in case agreement cannot be reached, the parties have several options, including to refer to good offices or mediation, to declare to accept arbitration or to submit the dispute to the International Court of Justice as compulsory. Alternatively disputes may be submitted to conciliation (article 27 and annex II).

### **The Biosafety Protocol**

As envisaged in article 19, paragraph 3, of the Convention, the parties initiated consideration of a protocol on biosafety at the first COP meeting in 1994. The negotiations

were exceptionally arduous because of the economic stakes involved and the scientific uncertainty related to the use of living modified organisms resulting from biotechnology (LMOs). Compromise had to be established between countries exporting genetically engineered crops, countries with serious concerns about food safety and environmental protection, and those countries that are heavily dependent on agriculture. The Biosafety Working Group met six times between 1996 and 1999; thereafter, negotiations broke down at the extraordinary meeting of the COP, which was scheduled to adopt the Protocol in February 1999 in Cartagena, because of disagreements regarding appropriate consideration of economic interests. The extraordinary meeting was temporarily suspended and only resumed after three more negotiation rounds achieved compromise. The Protocol was finally adopted in Montreal on 29 January 2000 and entered into force on 11 September 2003.

The Protocol is guided by the precautionary approach in its objective of trying to achieve safe transfer, handling and use of LMOs that may have adverse effects on the conservation and sustainable use of biodiversity, including considerations of risks to human health (article 1). The centre of the Protocol's attention lies on transboundary transfers; the decision procedures for import and export of LMOs for intentional introduction into the environment and for those LMOs intended for direct use as food or feed, or for processing, differ in their complexity and stringency. An Advanced Informed Agreement (AIA) procedure is compulsory prior to the first intentional transboundary movement of LMOs intended for introduction into the environment of the party of import. The AIA consists of a notification, exchange of information and decision procedure that takes place between the exporting and importing country (articles 7-10 and 12). For LMOs intended for direct use as food or feed, or for processing, a simplified information procedure applies (article 11). Both procedures adhere to the rule that lack of scientific certainty regarding the extent of potential adverse effects shall not prevent a party from taking a decision.

Information with respect to decisions, national legislation, scientific research and knowledge, as well as technology and environment is shared between all Contracting parties and with the public through the Biosafety Clearing-House, which is established as part of the clearing-house mechanisms of the Convention (article 20). Each country is under the obligation to designate a national focal point to liaise with the Secretariat and a national competent authority to carry out administrative functions required by the Protocol (article 19).

Parties have the right to take action that is more protective of conservation and sustainable use of biological diversity than that called for in the Protocol; they can also take socio-economic considerations that arise from the impact of LMOs into account in their import decisions. Both instances, however, have to be carried out in accordance with the party's other obligations under international law (articles 2 and 26). With regard to the relationship between the Protocol and other international obligations, in particular obligations deriving from the WTO agreements, the Protocol is guided by the principle of mutual supportiveness. Mutual supportiveness, as foreseen in the preamble of the Protocol, excludes subordination of the Protocol to trade agreements. Rather, the Protocol and trade agreements should be read in a complementary way with a view to achieving sustainable development. The practical implications of mutual supportiveness between the Protocol and WTO agreements remain to be clarified.

In addition to the dispute settlement provisions of the parent Convention, the Protocol includes provisions with respect to compliance (article 34), as well as liability and

redress for damage resulting from transboundary movements of LMOs (article 27). A facilitative compliance mechanism has been established by the COP serving as the Meeting of the Parties to the Protocol (COP-MOP). A Compliance Committee assists the parties in fulfilling their obligations; it held its first meeting in March 2005. With respect to liability and redress, the parties have decided to draft legally binding rules and procedures for consideration at the next COP-MOP meeting in 2010.

### **Impact of the Convention on Biological Diversity**

It is too early to tell whether this legal framework will succeed in contributing to a slower rate of biodiversity loss, and it remains to be seen whether an appropriate balance has been struck between economic and environmental interests with respect to biological diversity. Because the Convention is a process-oriented instrument and does not include specific targets in its objectives, its success depends to a large extent on the willingness of the Contracting parties to pursue the objectives of the Convention, and on their cooperation for the conservation and the sustainable use of biological resources, and the sharing of the benefits arising out of the utilization of the genetic resources. The Convention provides a universal framework for achieving mutual benefits for developed and developing countries, their economies and their ecosystems. Requirements for information exchange, cooperation with respect to capacity-building and transfer of technical and scientific know-how, as well as the establishment of a financial mechanism should allow developing countries to benefit from their richness in biological diversity, while access to genetic and biological resources is, subject to some conditions, guaranteed for those actors who seek to advance knowledge and technological innovation in this field. On a different level, the details of what exactly the mutual supportiveness of the Biosafety Protocol and trade agreements consist of in their implementation still need to be established. While it is generally agreed that the Protocol is not subordinated to trade agreements, it remains to be seen whether the rights and obligations relating to biosafety that are embodied in the Protocol can be implemented together with the rights and obligations included in trade agreements.

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\*Comment prepared with the assistance of Ms. Christina Leb, Researcher, Faculty of Law, University of Geneva.

### **Related Materials**

#### **A. Legal Instruments**

Declaration of the United Nations Conference on the Human Environment (Stockholm Declaration), 1972. *Report of the United Nations Conference on the Human Environment, Stockholm, 5-16 June 1972* (United Nations publication, Sales No. E.73.II.A.14 and corrigendum), chap. I.

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**B. Documents**

IUCN General Assembly resolution 15/10, Christchurch, New Zealand, 11 to 23 October 1981.

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UNEP Governing Council decision 15/34 of 25 May 1989 (preparation of an international legal instrument on the biological diversity of the planet).

Conference of Parties to the Convention on Biological Diversity, COP 5 decision V/26, 15 to 26 May 2000 (access to genetic resources).

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**C. Doctrine**

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