

## Convention on Biodiversity

Trevon Fuller

The Convention on Biological Diversity is an international treaty for conservation of biological diversity, sustainable use of the environment, and equitable sharing of the benefits of genetic resources (Table 1). The convention addresses some of the central topics in contemporary environmental ethics and philosophy, such as the concept of biodiversity and anthropocentrism versus ecocentrism (Yamin 1995). Other philosophical issues dealt with by the convention include the moral status of nation-states and the ethical obligations of the present generation to future generations.

### History

The World Conservation Strategy of 1980 adopted by the World Conservation Union, World Wide Fund for Nature, and United Nations Environment Programme is considered the starting point of negotiations at the United Nations (UN) throughout the 1980s that culminated in the Convention on Biological Diversity (Shine and Kohona 1992, Boyle 1996, Stoianoff 2004).

Whereas the World Conservation Strategy focused on the loss of biological diversity, the UN Environment Programme's Governing Council also wanted to address socioeconomic issues in developing countries that contributed to that loss. In 1986 the World Commission on Environment and Development proposed legal principles that would require states to maintain maximum biological diversity. In 1987 the UN Environment Programme Ad Hoc Working Group of Experts on Biological Diversity proposed a convention on biological diversity, the drafting of which began in 1989 (Secretariat of the Convention on Biological Diversity 2005). From 1991 to 1992 the UN Environment Programme Working Group of Legal and Technical Experts negotiated the treaty in seven sessions. The Convention on Biological Diversity was

opened for signature at the UN Conference on Environment and Development on June 5, 1992, in Rio de Janeiro. One hundred eighty-seven countries and the European Union (EU) have subscribed to the convention, which entered into force on December 29, 1993.

### Significance

In contrast with previous environmental treaties, which were designed to protect particular ecosystems, species, or resources, the Convention on Biological Diversity represents a new development in international law to the extent that it formulates a comprehensive framework for the conservation of global biological diversity (Boyle 1996). However, the term *biological diversity*, as used in the convention, has several meanings. For example, the preamble of the convention ascribes “intrinsic value” to biological diversity, but its articles exemplify anthropocentrism insofar as they characterize utility to human beings as the fundamental purpose for conserving the environment (Yamin 1995). The convention equates biological diversity with “variability among living organisms” (Article 2) but also lists wilderness as a component of biological diversity (Annex I) (Sarkar 1999). The conflation of biodiversity and wilderness is not justified on scientific grounds and may have been added to the convention for political reasons.

The convention constitutes a case study in ethics because of its use of the principle of distributive justice. Recognizing that biodiversity is concentrated in southern countries but wealth is concentrated in northern countries, Article 8 directs northern countries to provide financial support to developing countries for biodiversity conservation, scientific education, and training. In addition, the convention acknowledges the ethical obligations of present-day human beings to posterity, prescribing that biological diversity be used to “meet the needs of present and future generations” (Article 2).

### Proposal of the Convention

Serious disagreements between developed nations and the Group of Seventy-Seven nonaligned developing nations complicated the negotiations for the convention. Developing states sought access to biotechnology and compensation for providing biological resources to developed nations. The United States objected that the directives of the convention for the transfer of biotechnology would erode intellectual property rights; ultimately, the convention was signed by the Clinton administration but not ratified by Congress (Boyle 1996). Drafts of the convention characterized biological diversity as the “common heritage” of humankind, but that wording was dropped from the final version because developing nations were concerned that it could justify infringement on national sovereignty.

#### Acceptance and Effects of the Convention

Since the convention entered into force, it has become standard practice to obtain informed consent from developing countries for natural products discovery programs intended to produce new drugs or improved crop plants; however, not enough time has passed for this practice to provide royalties to developing countries (Davis 2007, Miller 2007). Administrative bodies created by the convention include the convention secretariat and the Conference of the Parties, which reviews the implementation of the convention and can amend it. However, the convention does not create an international authority to manage shared biological resources (Boyle 1996). This is problematic because it is sometimes unclear where the authority to regulate a sought-after biological resource resides within the government of the country that has that resource (Lesser 1998, Chaves 2004). To address this issue, the convention secretariat created a list of national focal points to help organize negotiations on the sharing of genetic resources.

Since 1998, sixteen developed countries have provided \$1 billion per year to fund the objectives of the convention, but such financing has been in decline or stagnant (Secretariat of

the Convention on Biological Diversity 2006). Nevertheless, the convention secretariat has set the agenda for international environmental agreements such as the Cartagena Protocol on Biosafety, which regulates the international transportation of genetically modified organisms; the Bonn Guidelines on Access to Genetic Resources; and the 2010 Target, a program to establish an ecologically representative network of terrestrial protected areas by 2010 and marine protected areas by 2012 (Secretariat of the Convention on Biological Diversity 2006).

Since ratifying the convention, the EU has developed laws to promote the sustainable use of biodiversity (as required by Article 6) and to protect wildlife through conservation areas, seed and gene banks, and zoos, as required by Articles 8 and 9 (European Commission 2006). The EU also has provided €60 to €200 million per year since 2001 for biodiversity-related projects in developing countries. Since the convention entered into force, the governments of Ecuador and the states of Queensland and Western Australia in Australia have enacted legislation conferring on their citizens the right to profits generated by biodiversity; in addition, Costa Rica, Fiji, Mexico, and Peru have passed laws to ensure that access to genetic resources is based on prior informed consent (Stoianoff 2004).

Article	Article Topic or Goal
Preamble	Characterizes the conservation of biological diversity as a “common concern of humankind.”
1	Describes convention's objectives: conservation and sustainable use of biodiversity and equitable sharing of genetic resources.
2	Defines <i>biological diversity</i> and <i>sustainable use</i> .
3	Affirms states' rights to exploit their own resources.
6	Delineates requirements for national and international conservation plans.
7	Describes directives for biodiversity monitoring. Each state creates its own list of important ecosystems and species.
8	In situ conservation: conservation of ecosystems and species in their natural habitats.
9	Ex situ conservation: conservation in seed and gene banks and zoos.
10	Sustainable use of biological resources to prevent their long-term decline.
11	Incentive measures.
12	Establishment of scientific training programs related to biodiversity and support for such training for developing countries.
13	Public awareness and education.
14	Environmental impact assessment and the minimization of adverse impacts.
15	Rights of states to genetic resources. Requirements for sustainable use limit state sovereignty over genetic resources.
16	Transfer of biotechnology.
18	Improvement of the research and technical capabilities of developing countries.
19	Distribution of the benefits of biotechnology.
20	Financing of the convention, including the transfer of funds from developed nations to developing nations.
24	Establishment of the convention secretariat (located in Montreal), which organizes meetings of the Conference of the Parties.
25	Establishment of a subsidiary body to provide scientific, technological, and technical advice.
27	Dispute resolution.
39	Establishment of the Conference of the Parties and designation of the financial mechanism of the convention.

Table 1. Main Goals of the United Nations Convention on Biological Diversity

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