

The Convention on Biological Diversity: Negotiating the Turn to Effective Implementation



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ABSTRACT ► Ten years after its adoption, the Convention on biological diversity (CBD) seems to have made little progress toward slowing the loss of biological diversity worldwide. Yet, progress has been significant in many ways although difficult to measure beyond procedural improvements and the development of new tools. Many challenges remain, both at the level of the operation of the regime and of national implementation, in part due to the complex nature of the convention and to its far-reaching political, commercial and social implications. This article identifies ways in which the implementation of the convention has contributed to building several prerequisites associated with the effectiveness of environmental regimes and outlines features that make the CBD a truly unique instrument, one that contains the seeds of the major issues that will shape the dynamics of 21st century international environmental politics. (Translation: www.isuma.net)

RÉSUMÉ ► Dix ans après son adoption, la Convention sur la diversité biologique (CBD) semble avoir peu contribué à ralentir la dégradation de la diversité biologique à l'échelle planétaire. Pourtant, d'importants progrès ont été réalisés, même s'il n'est pas facile de mesurer d'autres éléments que l'amélioration des procédures et la mise au point de nouveaux outils. De nombreux défis demeurent, tant sur le plan du fonctionnement du régime que sur celui de la mise en œuvre nationale des engagements des États, en raison, notamment, de la nature complexe de la Convention et de ses profondes incidences politiques, commerciales et sociales. Cet article examine la façon dont la mise en œuvre de la Convention sert la promotion de plusieurs conditions préalables à l'efficacité des régimes environnementaux et montre comment la CBD illustre les grands enjeux qui caractérisent la politique internationale de l'environnement d'aujourd'hui, dix ans après Rio.

ALTHOUGH THE Convention on Biological Diversity (CBD) was one of the two conventions signed at the 1992 United Nations Conference on Environment and Development, it has largely remained in the shadows of the UN Framework Convention on Climate Change (UNFCCC). Yet, if the latter points to a fundamental reordering of national economies the CBD has the potential of profoundly reshaping the relationships between humans and nature, as well as the distribution of social, cultural, political and economic rights, responsibilities and benefits among and within States. It promotes a new relationship with nature that seeks to reconcile the intrinsic value of biodiversity with dominant utilitarian arguments. It does not posit conservation as the pillar of the relationship between societies and nature. Rather, it affirms the primacy of social and economic development. The reconciliation of this duality of conservation and sustainable use, along with the management of the far-reaching political implications of the convention, presents enormous challenges to the implementation and acceptance of the regime. To what extent has the international community made progress toward building the conditions of meeting these challenges?

The preservation of species and ecosystems lies at the core of the environmental movement, and of the earliest attempts by governments to protect them. These concerns have led to numerous agreements, yet species and ecosystems continue to vanish. Adopted on May 22, 1992 in Nairobi and formally opened for signature on June 5, 1992 at the UN Conference on Environment and Development (UNCED), the Convention on Biological Diversity (CBD) entered in force in December 1993. Conceived initially as a means of putting some order into disparate agreements regarding the protection of wildlife, the CBD quickly moved beyond this narrow concern. It addresses issues that range from ecosystem protection to the exploitation of genetic resources, from conservation to justice, from commerce to scientific knowledge, from the allocation of rights to the imposition of responsibilities. It is, therefore, criss-crossed by very different political dynamics. Indeed, its three goals of conservation, sustainable use and benefit-sharing make it perhaps the first true sustainable development convention.

Ten years is a short period on which to base an evaluation of the CBD's normative impacts on the behaviour of countries and people or to determine whether it has improved the health of ecosystems or the quality of life. But it is long enough for us to assess the contribution that its implementation has made toward creating the conditions that will help redirect these actors' behaviour toward meeting the goals of the convention.

The evolution of the CBD since 1992

A regime is a dynamic institution. The CBD regime has not stood still, nor could it. Institutionally, the evolution of the CBD has been both significant and limited. On the one hand, unlike the UNFCCC and the United Nations Convention to Combat Desertification (UNCCD), no new subsidiary body for implementation has been created.¹ On the other hand, a new protocol on the transboundary movements of

living modified organisms (the Cartagena Protocol on Biosafety) was successfully, albeit painfully, negotiated in 2000 and institutionally incorporated into the Convention Governance System (CGS).² Two new subsidiary bodies were created: the Conference of the Parties (COP) responded to calls for a protocol on indigenous populations by setting up an innovative Open-ended Ad-Hoc Working Group on Article 8(j), and an Ad Hoc Open-ended Working Group on Access and Benefit-sharing was created to further the third objective of the convention. Moreover, the Secretariat, the Subsidiary Body on Scientific, Technical, and Technological Advice (SBSTTA) as well as the COP have established various panels and groups to advise them on specific matters. Yet, uncertainties remain regarding the proper role of the SBSTTA and the role and interrelationships of the various advisory groups created by the COP, SBSTTA or the Secretariat.

Operationally, five thematic programs have been initiated: on marine and coastal biodiversity, forest biodiversity, agricultural biodiversity, the biodiversity of inland waters, and dry and sub-humid lands. One other thematic area, mountain ecosystems, will be considered at COP-7 in 2004. In addition, several methodological and cross-cutting issues are being addressed, such as indicators, access and benefit-sharing, the ecosystem approach, protected areas, sustainable use, invasive alien species, assessments and traditional knowledge, with the ecosystem approach providing the primary framework for action under the Convention. Given the uncertainty of the science underlying these notions as well as their socio-political dimensions, progress has been slow and their integration into specific work programs at the international and national levels will likely be difficult. However, these are also examples of the "forcing" role of the Convention as it fosters the development and operationalization of heretofore poorly defined concepts.

Given its scope, the multiple demands put upon it, and the necessity to become rapidly operational the CBD had difficulties dealing with the breadth of its work program and the expectations of the various constituencies that supported it. This hampered the effectiveness of the SBSTTA which faced an almost unworkable agenda. Accordingly, "A wide array of measures have been agreed upon in the context of the ongoing improvement of the operations of the Convention"³ ranging from the production of a massive handbook to the establishment of additional guidelines for the interface between the COP and SBSTTA, the identification of a program of work for the period from COP 4 (1998) to COP 7 (2004), and the adoption of a strategic plan in 2002. At the same time, SBSTTA undertook several internal procedural reforms to streamline its work and improve its input to the COP.

Finally, financing for the Secretariat and the institutions of the conventions has grown substantially, in line with the development of its programs, and this trend will continue with the implementation of the Cartagena Protocol. Financing for biodiversity by the Global Environment Facility (GEF) has also increased significantly and is now the largest

portfolio of the CEF. During FY 1995-2000, the CEF approved 339 projects with a total commitment of over US\$ 844 million. By 2001, the financial mechanism had provided support to over 130 developing countries to develop national biodiversity strategies. Two cautionary remarks are in order. First, the actual level of biodiversity funding remains unclear, as is the extent to which additional resources have been forthcoming. Due to lack of standardization in the reporting procedures of funding institutions the monitoring of these commitments through bilateral and multilateral aid programs and private investments has proven difficult. Second, the level of voluntary contributions reflects a situation prevalent in the UN system especially in the environment, where countries fund pet programs, thus making planning more difficult and potentially skewing the implementation of the convention toward issues that may be peripheral to the needs and concerns of a majority of its members.

The convention has also developed unevenly. Some items such as sustainable use have yet to receive substantial consideration by the COP (except for tourism and scattered decisions on agriculture, forests or marine biodiversity that reflect this preoccupation). Others, such as benefit-sharing, are proving extremely complex to put in practice. Still others have developed in importance to an extent that was largely unforeseen at the time of negotiation. Article 8(j),⁴ for example, has become one of the more powerful instruments that indigenous populations have had at their disposal for protecting and promoting their rights relative to those of the State and civil society at large (although article 15 emphasizes the rights of governments over their population).⁵ It has fostered international co-operation and in practice has led to a redefinition of biodiversity issues in socio-economic terms, a far cry from what conservationists had in mind in 1987 when the first proposals for a biodiversity convention surfaced. It remains to be seen how successful “local populations” will be in using the Convention to reorder their relations with other groups and with the state and to resist globalisation pressures. The CBD may not only reorder humans’ relationship with nature but also their socio-economic relations as well.

The impact of the adoption of the Cartagena Protocol on the evolution of the implementation of the CBD may also be profound. On the one hand, by channelling increased resources into the Convention, it could foster rapid implementation of some of its institutional mechanisms (such as the Clearing House Mechanism, CHM) and policy aspects (such as co-operation with other organizations). On the other hand, there is the danger that the management of the protocol could become one of the central activities of the CGS, focusing the efforts and resources of the Secretariat on the priorities of developed countries at the expense of furthering other dimensions of the convention. Indeed, considerable time was already invested in negotiating the protocol, at the expense of national- and regime-level implementation of the CBD.

The CBD has also had a significant normative impact. The CBD has not only developed and disseminated new

norms; it has also become a pre-eminent vehicle for norms that were initially considered secondary, or that were incipient in the original agreement. Clearly, the CBD is not just about conservation; in practice as well as on paper; it is also about equity, human, economic and political rights. The CBD has been central in the development of the ecosystem approach as well as of norms associated with the other two goals (sustainable use and benefit-sharing), and, although it continues to struggle with the proper balancing of its three objectives, it remains central to attempts to link these three goals into a coherent set of norms and actions. Therein lies one of the major challenges of the CBD for parties from both the North and the South. How will the CBD manage the contradictions that may exist among the norms intrinsic to the agreement, such as between conservation, sustainable development and benefit-sharing, or between traditional knowledge and practices on the one hand, and conservation on the other? All good things do not always go together.

The implementation of the CBD

The number and range of obstacles to the full implementation of the regime are vast. The following section examines but a few of the more salient examples, distinguishing between implementation at the regime level and at the national level.

Implementation at the regime level

The CBD joined a crowded field of multilateral and regional environmental and development agreements and this forced it to assert its mandate, or at least its legitimate interest, over a wide range of issues that are central to its goals. This challenge was complicated by the differing perceptions of the CBD as a “residual” (taking up matters not considered elsewhere), an “umbrella” (co-ordinating existing agreements), or a “framework” convention (laying down principles and orientations later to be turned into binding obligations through future protocols). A case in point is forests. Although the clear role and mandate of the CBD in issues of forest biological diversity has been repeatedly confirmed by the parties, and it is recognized within the CBD that it is vital that issues related to forests be dealt with in a comprehensive and holistic manner, the CBD has had difficulties playing a central role in the international debate over forests. Given the competing claims of other inter-governmental organizations (IGOs), the diversity of States’ interests, and the reluctance to favour one set of norms over another, States have favoured discussing these issues at the UN level. Nevertheless, in 2002, delegates adopted a work program on forests designed to move from research, co-operation and the development of technologies necessary for the conservation and sustainable use of forest biological diversity to practical action with a focus on national measures.

In terms of network-building, the CBD led to the emergence of several NGO-based networks largely devoted to information-sharing about convention related activities. Largely absent from the negotiations, NGOs have assumed

an active role in implementation. The CBD strengthened existing NGOs and networks eager to promote the goals of the convention, notably the conservation of biological resources and the promotion of indigenous issues. At the national level new national biodiversity coalitions were formed and associations created. Its role in the emergence of academic and scientific networks in support of the objectives of the regime remains less clear. The Secretariat itself has worked with a limited number of well-established institutions. However, its action has in general been concentrated on co-ordination with other bodies.

Indeed, the COP and SBSTTA have repeatedly urged the Secretariat to pursue co-operation with other IGOS. Accordingly, the number of Memoranda of Co-operation and Memoranda of Understanding (MOU) signed has grown steadily, but most have yet to be translated into effective action. In some cases, this co-operation is complicated by the relative youth of the Rio Treaties and other agreements. When two regimes in the making are trying to establish the legitimacy of their role in a given issue area they are reluctant to negotiate a form of co-operation that may amount to a sharing of responsibilities. In other cases, one party has been reluctant to accept what may eventually become a normative claim on its activities. Co-operation is complicated by the fact that the CBD is dependent on co-operation with other bodies to promote and implement its provisions. Thus the question arises of the relationship between this newcomer and earlier agreements and initiatives and of the harmonization of the new principles it embodies with the norms and rules of international law found in previous agreements. Successful co-operation rests on the capacity to harmonize these different norms and approaches.

Therefore, it is not surprising to see that the first co-ordination efforts were undertaken with the Ramsar Convention⁶ that shares the CBD's ecosystem centered perspective. In contrast, although the conservation object of the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES)⁷ and the CBD could not appear closer, co-operation is more difficult in part because of the species-centred perspective of the former which "virtually ignores socio-economic and human development factors affecting biodiversity conservation and sustainable development."⁸ Co-ordination and harmonization become even more difficult when one considers other regimes such as those dealing with trade and intellectual property rights (IPR). On a number of occasions, the COP has addressed the relationship between the CBD and the Agreement on Trade-related Aspects of Intellectual Property Rights (TRIPS).⁹ In the case of trade rules, the complexity of the task is clearly made apparent in the efforts of the Cartagena Protocol and the International Treaty on Plant Genetic Resources for Food and Agriculture (signed on November 3, 2001) to reconcile environmental protection, human welfare, trade liberalization and property rights. It is also worth mentioning that the secretariats of the CBD and UNFCCC have not yet signed a MOU despite numerous interlinkages between both conventions and repeated calls by the CBD-COP (COP5) to take biodiversity concerns into

consideration in the implementation of the Kyoto Protocol. It is incumbent upon the parties to overcome their tendency to compartmentalize issues (fragmentation perhaps being the price one pays for avoiding complete paralysis through endless linkages) and to realize that international coordination begins at home.

SBSTTA was the first, and remains the most important, subsidiary body of the CBD. This underscores the importance negotiators originally placed on the development of scientific knowledge for biodiversity. Yet, the absence of consensual scientific knowledge in support of the work of the convention has been seen as one its greatest shortcomings. Scientists and many environmentalists have bemoaned the slow development of indicators of performance that would allow them to judge whether the convention actually works. One imposing barrier to the formulation of such indicators is that what appeared to be largely a scientific process has become embroiled in political controversy. Some countries, for example, feared that these indicators would reflect only northern priorities and could be used to determine eligibility for financial and technical assistance. In addition, although the ecosystem approach has been further described and developed, it needs further operationalization and its implementation, particularly its participatory dimension, remains complex.

The problems that SBSTTA has encountered, (namely heavy workload, uncertainty about its role, poor co-ordination with other convention bodies, and weak international leadership) are compounded by questions related to the legitimacy of the type of knowledge being promoted (i.e., Western scientific) and the type of issues addressed by this body. SBSTTA has even played a secondary role in the development of basic knowledge. In response to initiatives by scientists, various attempts to improve the scientific basis of biodiversity-related decisions have been launched largely independently of the CBD although, ultimately, they must be linked to its work. One of the challenges will be to develop mechanisms to ensure that SBSTTA both has input into the problematic of these scientific initiatives and can use their results effectively.

The first significant scientific initiative of SBSTTA has been The Global Taxonomic Initiative (GTI), which aims to remove taxonomic obstacles to data collection and the development of knowledge. A second scientific program undertaken was the assessment of the status and trends of, and major threats to, forest biological diversity in 2001.

Ultimately, the socialization function of SBSTTA may prove more central to the promotion of the goals of the regime than its scientific initiatives. Delegates familiarize themselves with the process and operation of the regime and participate in its governance. SBSTTA helps disseminate new norms and new knowledge, legitimizes scientific parameters of decision making, and allows for a better identification of the political dimensions of the scientific discourse. In the end, SBSTTA's functions become that of raising awareness, especially among delegates, and providing an institutional and international context for the pursuit of national scientific initiatives.

Rather than the development of fundamental knowledge, the CBD has focused on national implementation, on raising awareness among parties, and on the development of a set of common tools. Apart from technology transfers and additional financing, the convention places particular emphasis on scientific co-operation, economic tools, impact assessments, participation, negotiation with relevant stakeholders, indicators and the development of the ecosystem approach. Developing these tools has proven more difficult than previously assumed. The COP has often insisted on the gathering and exchange of information as a tool for developing concepts and procedures and sharing best practices. In particular, parties have been asked repeatedly to submit case studies to the Secretariat. That few have done so may be a reflection of the lack of direct impact of the CBD on national scientific research. Finally, the development of the CHM, which is central to the implementation of the convention, has suffered not so much from a lack of resources than from conceptual uncertainties and probably too much focus on the “hardware” and less on the “software” and on building a range of options derived from existing lessons learned.

Implementation at the national level

The CBD strengthens and expands the sovereign rights of States over their biological resources; but it contains no binding obligations. In exchange for this recognition of their sovereign rights, the preamble of the CBD reaffirms that “States are responsible for conserving their biological diversity and for using these biological resources in a sustainable manner.” From the outset, the COP has identified strengthening national and local capacities as a priority, and the Secretariat has worked with governments and non-State actors to launch a series of efforts to support the work of the CBD on capacity building. Yet, a lack of capacity remains one of the biggest constraints on the development and implementation of the CBD. A certain number of general capacity-building issues find easy illustrations in the context of the CBD.¹⁰ Many of these problems affect not only developing but also industrialized countries. They include:

- uncoordinated administrative structures, divided and competing levels of administrative authority: these pose obstacles not only to the implementation of the CBD but also to the development of synergies among global conventions;
- a brain drain effect: after attending professional development courses, government officials can and do get promoted without fully implementing skills learned on the job or training others. In other cases, they will join the local branch of international NGOs or IGOs;
- uneven participation in international fora by developing country experts: reasons range from a lack of information and networking, through limited resources for participation, to the domination of the process by a few individuals and the importance of English in international negotiating fora and in the background literature;
- inadequate communication between stakeholders and government at local levels, which may reflect not only a

lack of capacity but also political and cultural differences among countries.

Given its broad scope, it is no surprise that parties to the CBD have a long way to go to meet the expectations of the regime. Typically, parties will have met some but not all of these expectations to varying degrees (for example, a national strategy but no endangered species legislation; conservation areas but no benefit-sharing arrangements; etc.). In the case of developing countries, this situation is compounded by the failure of developed nations to abide by their own commitments. As specified in article 20 (4) of the CBD, the obligations and commitments of developing countries under the principle of common but differentiated responsibility are contingent upon the developed countries’ fulfilment of their commitments related to financial resources and transfer of technology.¹¹ In the Cartagena Protocol, the AIA procedure requires effective contributions from both trade initiators and recipient countries to protect biodiversity.

Assessment of the real degree of implementation is made more difficult by shortcomings in national reporting: information is not always reliable, reports are not filed on time or their contents differ widely, making comparisons difficult.¹² Yet, most countries have now adopted a national strategy and action plan (Canada in 1995). In certain cases, however, these strategies were only pro forma exercises.



In many instances, rather than evincing national priorities, these documents have been only first steps that helped to identify existing policies, administrative structures and constraints, define gaps in knowledge, and stimulate national discussion about these issues.

The complexity and scope of the convention, its relative lack of public visibility, its political ramifications and the underdevelopment of its key tools present significant challenges even for those developed countries, such as Canada, that have played a significant role in the negotiations and promoted this issue actively. In the case of both marine and terrestrial biodiversity, for example, the Canadian federal government still falls short of putting its biodiversity commitments into effect.¹³ To be sure, this sector has been characterized by substantial policy innovation. This innovation, however, was not attributable to the CBD, although its existence probably served to encourage existing trends. Problems of sectoral, federal-provincial and interministerial co-ordination abound, which prevent the development of integrated initiatives on the part of the different authorities responsible for biodiversity.

In other cases, many developing countries are confronted with potential or actual contradictions among international norms, and between international norms and local norms and priorities. The apparent acceptance of regime norms (as evidenced by reform of national legislation and administrative structures), which was largely imposed by external donors, may mask deep conflicts within national elites. One illustration of these difficulties, found both in Canada and in a country like Madagascar, is the challenge that public administrators face in implementing

the ecosystem approach and devising appropriate, credible and legitimate participatory structures. Insufficient attention has also been paid to potential conflicts between the goals of protecting ecosystems, species and genetic biodiversity, of benefit-sharing, and of sustainable development, which too often are assumed to be complementary. For example, actors who expect returns on their investment in the protection and utilization of genetic resources must also come to terms with existing rights and interests that have developed around the use of biological resources.

In the end, the effectiveness of the CBD will hinge as much upon learning and legitimacy as upon capacity building. Learning lies at the heart of an effective system of implementation review. It is probably premature to assess the degree of learning with any precision at this stage. Moreover, such an assessment will vary according to the type of learning that one has in mind. At the national level individual learning may have been significant but its translation into organizational learning is more open to question. Similarly, there may be a gap between social learning (related to values) and policy learning (related to government actions) in developed countries. As far as the CGS is concerned, there are indications of some learning in reference to adjustments of organizational routines. This is almost inevitable given the framework character of the convention and the underdeveloped nature of some of the science that underlies its norms and procedures. At the level of the regime it is likely that the speed of policy learning will be a function of the openness of the decision-making structure.¹⁴

Strengthening the legitimacy of the CBD is even a greater challenge. On the one hand, to be sure, the basic legitimacy of the CBD was secured during the negotiations through the multi-purpose character of the convention itself. Industrialized countries were able to focus the regime on conservation and access to genetic resources, while developing countries secured sovereignty over natural resources, differentiated responsibilities, benefit-sharing and sustainable use. But this compromise is also paradoxically the source of some illegitimacy as various constituencies question purposes they deem peripheral to their concerns and denounce the "lack of results" of the convention, itself a function of the complexity of the biodiversity issue and of the convention itself. For example, many conservationists will criticize the focus on sustainable use and industry of technological transfers; indigenous populations will criticize the hegemony of western science; some governments will criticize the role of indigenous populations; and scientists will criticize the nature and operation of SBSTTA. Legitimacy will depend on the performance of the CGS in pursuing the principles and objectives in which its authority is founded and in a delicate balancing of the various objectives and concerns of the Convention. And it will lie more in the operation of the CGS than in any public awareness program.

Toward a new order?

The beginning of the 21st century is characterized by rival yet complementary paths toward human welfare. The CBD represents such a path through its advancement of a set of



principles, priorities and instruments that have the potential of representing a new order based on natural and human diversity, equity, respect for life, access to basic resources and harnessing of the natural world for human welfare (aesthetic and spiritual as much as economic). The philosophical and political implications of the CBD are not benign.

The CBD also illustrates a general movement of enclosure or reappropriation of nature by States and local populations, in the face of similar attempts by the market, a movement illustrated by the introduction of IPRs on living matter. Biodiversity is a worldwide problem that has local solutions. It is humanity's common concern and not its common heritage. Indeed, the Convention takes up and goes far beyond Principle 21 of the 1972 Stockholm Declaration which declared the sovereign right of States to exploit their natural resources in accordance with their own environmental priorities. It recognizes States' sovereignty over their genetic resources at the same time as it reaffirms the principle of open (but not free or free of rules) access to these resources. But this redistribution of rights is not limited to States, as local communities, which have shaped that biodiversity and depend on it for their cultural and economic survival, also claim a right to partake in the benefits of biodiversity and to participate in the definition of the principles that should govern its use. Thus, by creating new expectations the CBD also creates new conflicts regarding IPR in the context of genetic resources.

The political dynamics regarding the implementation of the CBD revolves around the nature and shape of the principles and rules that will govern our relationship with nature and the distribution of the costs and benefits arising from the use and protection of biological resources. Some factors promote this incipient order: the extension of the rights of States and local populations; the recognition of the interrelationship of the three goals of the convention and attempts to give them concrete meaning; new political coalitions; the emergence of new networks; and innovative governance structures as represented by the CGS. Others work against it: institutional fragmentation devoid of coordination; conflicting norms and contradictions within the regime itself; uncertain legitimacy, unequal power relationships at the national level; conflicts among regimes (notably between the CBD and the trade and IPR regimes); and shortcomings in national capacities. The road will be sinuous, long and rough, and many bridges need to be built for the principles and objectives of the CBD to be given meaning. The success of the journey depends on strengthening the determinants of regime effectiveness. The international community is now committed to implementing a set of principles and objectives that go far beyond the protection of life on Earth but also hold the promise to reorder fundamental relations among human communities. In truth, through the CBD humanity has embarked on a large and uncertain political experiment.

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Endnotes

1. The UNFCCC has the SBI (Subsidiary Body for Implementation) and the UNCCD the CRIC (Committee to Review the Implementation of the Convention) adopted in 2001.

2. The aim of the Cartagena Protocol to the CBD is to ensure "an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health" (art.1). To this end, it defines a set of binding rules governing international shipments of such organisms, including trade in those LMOs which are agricultural commodities directly used for food and feed, or subsequently integrated into processed products. See F. Pythoud and U. Thomas, "The Cartagena Protocol on Biosafety," in P. Le Prestre (ed.), *The Evolution and Implementation of the Convention on Biological Diversity*, forthcoming.

3. UNEP-CBD, "Operation of the Convention," 16 Dec. 1999, p.6 (UNEP/CBD/COP/5/17).

4. Article 8 which deals with "In-situ conservation" requires contracting parties to "respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices;"

5. According to article 15(1) "the authority to determine access to genetic resources rests with the national governments and is subject to national legislation."

6. "Convention on Wetlands of International Importance especially as Waterfowl Habitat" (Ramsar Convention), Feb. 2, 1971.

7. March 3, 1973.

8. J. Ovejero, "The Contribution of Biodiversity-Related Multilateral Environmental Agreements to Sustainable Development: a Discussion of some of the Issues," prepared for "Inter-Linkages - International Conference on Synergies and Coordination between Multilateral Environmental Agreements," United Nations University, 14, 15 and 16 July, 1999 (Tokyo).

9. One of the concerns about the TRIPS agreement stems from its emphasis on the protection of formal knowledge; it appears very unsuitable for collectively held and often intergenerational farmers' rights which often do not fulfil the requirement of novelty that undergirds patents rights: see U. Thomas, "The CBD, the WTO and FAO: The Emergence of Phytogenetic Governance," in *Governing Global Biodiversity*, supra, note 2.

10. On the evolution of the approach to capacity building, see G. Paoletto, "Capacity Building Systems for Inter-Linkages," Inter-Linkages Conference, supra note 8.

11. See UN ECOSOC, *Implementation of the Convention on Biological Diversity* (1997) (E/CN.17/1997/11).

12. The Secretariat and the COP have taken steps to overcome this latter problem by proposing a model structure that would ensure that pertinent information is included.

13. P. Halley, "Development of Canadian Policy and Protection of Marine Diversity," in *Governing Global Biodiversity*, supra, note 1.

14. M. Howlett, "Complex Network Management and the Governance of the Environment: Prospects for Policy Change and Policy Stability," in E.A. Parson (ed.), *Governing the Environment: Persistent Challenges, Uncertain Innovations* (Toronto: University of Toronto Press, 2001), pp. 303-344.