The CBD at Ten: The Long Road to Effectiveness *

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Abstract

This article reviews progress and challenges in the implementation of the Convention on biological diversity since its adoption in 1992. Progress has been significant in many ways, although difficult to measure beyond procedural improvements (creation of new institutions, guidelines, national processes) 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 nature of the convention and the complexity of its relationships with other regimes. Since knowledge about the state of biodiversity is scant and indicators poor, the argument is advanced that we should assess CBD’s success and effectiveness by its ability to promote several of the preconditions of regime effectiveness. Accordingly, this article considers the record of the CBD in terms of learning, capacity-building, network building, transparency, and the elaboration and diffusion of new norms.

Keywords: biodiversity, convention, effectiveness, implementation, regime

In 2000, the US National Intelligence Council boldly predicted that by 2015 “[environmental] agreements, such as the Convention on Biodiversity (CBD),”1 will fall short in meeting their objectives.”2 Discounting that the US is apt to belittle agreements it has refused to join (and even worked to undermine during the negotiations), predictions about the success of the CBD are indeed largely pessimistic. Research suggests that the race to protect ecosystems is being lost while new threats continually arise.3 Existing agreements whose nature reflects the very complexity of the environment-politics nexus are considered too unwieldy and ineffective to stabilize a dramatic trend that irrevocably spirals downwards.


Indeed, the CBD is a wide-ranging, ambitious, and deeply political convention. Its very scope has been seen as a weakness. Under such circumstances, States naturally tend to favour certain objectives that accord better with their national priorities, the power of specific constituencies, or their own interpretation of what constitutes the core of the convention; which leads to the danger that implementation will be asynchronic. Group of 77 (G77) countries generally consider the three basic goals of the Convention to be linked, which is what gives it its novel character, in their eyes. Other Parties and stakeholders, however, would like to de-link them. Activities are then promoted and supported in order to carry out what is deemed “more feasible” in the short term, putting other issues on the back-burner and leading sometimes to an international dialogue of the deaf.

The scope of the CBD goes well beyond conservation to encompass sustainable development and equity issues. Its concerns range from ecosystems 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 have led some to call it “the first truly and for the moment the foremost sustainable development treaty.” It touches not only upon man’s relationship with nature and international relations but on the distribution of domestic political power as well. It involves, logically, taking into account not only the means of conserving biodiversity but also the causes of biodiversity loss and the processes that foster it, such as the structure of property rights, patterns of trade, culture, unsustainable development, and inequitable social relationships. Some observers will emphasize external determinants of biodiversity loss and protection in specific countries; others will point to the importance of cultural variables and to the social construction of biodiversity. Given the multiple dimensions of the CBD regime, it is likely that most efforts to evaluate its effectiveness will focus on one specific aspect of the agreement.


Which in 2001 included some 133 developing countries.

These objectives 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” (Article 1).


Effectiveness, defined for the purposes of this article as a change in behaviour consistent with the goals of the regime, rests on a certain number of prerequisites\(^{11}\) that pertain to the operation of the convention governance system\(^{12}\) (institutional development, operation, and financing), information and transparency, capacity-building (financing, national capacity-building), network-building (non-governmental organizations — NGOs, cooperation with other intergovernmental organizations — IGOs), the development of consensual knowledge (development of tools and indicators; role of the Subsidiary Body for Scientific, Technical, and Technological Advice or SBSTTA), legitimacy, and learning. The extent to which the CBD has made progress in strengthening these pre-requisites will be addressed in the following sections of this paper, which focus on the evolution and implementation of the CBD.

1. The evolution of the CBD since 1992

A regime is a dynamic institution. This dynamism stems from the state of the development of its learning capacity, from the nature of the Convention itself (in this case its framework character), from implementation efforts, and from its impact on the redistribution of interests and on the availability of means to pursue them. The CBD regime has not — indeed could not — stand still. Some delegations, notably from the United States, had even complained that the negotiations were too rushed, which meant that the final text contained too many “conceptual and drafting deficiencies” and that many gaps remained to be filled. Because the CBD was adopted although many contentious issues remained, “the post-agreement negotiations have proven particularly challenging.”\(^{13}\) The text of the CBD established the contours for its evolution and future program of work, notably the negotiation of a protocol on biosafety and the specification of the ecosystem approach. Despite the postponement of some of the most crucial element of negotiations (such as the nature of the financial mechanism), the CBD developed rapidly, coming into force barely eighteen months after its adoption and rapidly reaching quasi-universal membership, with a few exceptions, notably that of the US.\(^{14}\)

\(^{11}\) The concept of effectiveness has multiple definitions. The two most common are in terms of resolution of the problem and change in the behaviour of relevant actors. Since the former can depend on factors other than the agreement under study and is often difficult to measure, the former and more political meaning, is preferred here. For more on this debate and on the concept of regime effectiveness, see P. Le Prestre, *Studying the Effectiveness of the CBD*, in Le Prestre, *supra* note 8; O.R. Young, *Introduction: The Effectiveness of International Governance*, in Global Environmental Change & International Governance 1–27 (O.R. Young, G.J. Demko and K. Ramakrishna, eds., 1996).

\(^{12}\) The Convention Governance System (CGS) is the set of institutions created to implement the regime. In the case of the CBD, it refers to the Conference of the Parties, the secretariat, the scientific subsidiary body (SBSTTA), the clearing-house mechanism, the financial mechanism, the Ad-hoc working groups on Article 8(j) and on Access and Benefit-sharing, and future institutions connected with the Cartagena Protocol.


\(^{14}\) Although the US has yet to ratify the treaty (which it signed in 1993), it has taken an active part in its development.
Institutionally, the evolution of the CBD has been both significant and limited. On the one hand, unlike its two sister conventions, the United Nations Framework Convention on Climate Change and the United Nations Convention to Combat Desertification no new subsidiary body for implementation has been created. On the other hand, a new protocol on the transboundary movements of living modified organisms (The Cartagena Protocol on Biosafety) has been negotiated (two years behind the initial schedule) and institutionally incorporated into the Convention Governance System (CGS) along with the creation of new units. Two new subsidiary bodies were created: the 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) (AWGTK); and decision V/26 created an Ad Hoc Open-ended Working Group on Access and Benefit-sharing to further the third objective of the Convention. Further, the Secretariat, the SBSTTA as well as the COP have established various panels and groups to advise them on specific matters: rosters of experts, ad hoc technical expert groups, expert panels, working groups, and liaison groups. Yet, uncertainties remain regarding the proper role of the scientific subsidiary body and the role and interrelationships of the various advisory groups created by units of the CGS.

Operationally, five thematic programmes have been initiated: on marine and coastal biodiversity (the Jakarta mandate), forest biodiversity, agricultural biodiversity, the biodiversity of inland waters, and dry and sub-humid lands (not all are funded equally, however, which limits their development). One other thematic area, mountain ecosystems, will be under consideration 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 poorly defined concepts.

Given its scope, the multiple demands put upon it, and the necessity to become rapidly operational, it was feared that the CBD might collapse under its own weight in its early years. It had difficulties dealing with the breadth of its work programme and the expectations of the various constituencies that supported it. This hampered the effectiveness of the SBSTTA, which faced an almost unworkable agenda. Accordingly, the COP and SBSTTA endeavoured gradually to organize their program of work in order to focus efficiently on advancing a few issues at a time. In addition, at COP-4 the parties decided hold an intersessional meeting in June 1999 to consider possible arrangements to improve preparations for and conduct of the meetings of the COP, which led to substantial adjustments. Decision IV/16 also adopted a programme of work for the period from COP 4 (1998) to COP 7 (2004). Thus, “a wide array of measures has been agreed upon in the context of the on-

15 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.
going improvement of the operations of the Convention” ranging from the production of a massive Handbook to the establishment of additional guidelines for the interface of the COP and SBSTTA and the adoption of a strategic plan. At the same time, SBSTTA undertook several internal procedural reforms to streamline its work and improve its input to the COP. An Intersessional Meeting on the Strategic Plan, National Reports and the Implementation of the Convention took place in November 2001.

Finally, financing for the Secretariat and the institutions of the Conventions has grown substantially, in line with the development of its programs; this trend will continue with the implementation of the Cartagena Protocol. Financing for biodiversity by the Global Environment Facility (GEF) has also increased significantly; biodiversity is now the largest portfolio of the GEF. During FY 1995–2000, the GEF 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, however. 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, monitoring of these commitments through bilateral and multilateral aid programmes 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 Parties 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 (article 10) 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), 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. It has fostered international cooperation, and in practice, is leading 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” (whose definition is as political as it is anthropological) will be in using

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17 Article 8 which deals with “In-situ conservation” requires contracting parties “as far as possible and as appropriate” and “subject to its national legislation,” 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.”

18 According to Article 15(1) “the authority to determine access to genetic resources rests with the national governments and is subject to national legislation.”
the Convention to reorder their relations with other groups and with the state and resist
globalisation pressures. The CBD may not only represent an incipient biodiversity order
but an incipient socio-economic one as well.

The impact of the adoption of the Cartagena Protocol on Biosafety 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 cooperation with other organizations). On the other hand, there is the dan-
ger that the management of the Cartagena Protocol on Biosafety 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 Con-
vention. Indeed, considerable time was already invested in negotiation of the Protocol by
the Secretariat and the parties, at the expense of national- and regime-level implementation
of the CBD.

Normatively, the evolution has also been significant. 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. It has be-
come clear that the CBD is not just about conservation, in practice as well as on paper; it
is also about equity, human, economic and political rights. This importance stems, in part,
from the uneven prior institutional development of the three areas encompassed by the ob-
jectives of the Convention. Because a network of conservation-oriented groups, institutions
and agreements existed before the adoption of the CBD, it was able to focus on the areas
where it could break new ground, such as benefit-sharing and sustainable development. To
be sure, the CBD has been active in fostering cooperation, or the development of knowl-
edge (the taxonomy initiative, the ecosystems approach, forest biodiversity) or raising
awareness about several conservation issues (coral bleaching, alien invasive species, forest
biodiversity); but these activities might have been undertaken equally well and with sim-
ilar results in other settings had the CBD not existed. On the other hand, 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.

According to more extreme interpretations of Article 8(j), for example, the concept of
sovereignty, the first principle reaffirmed in the CBD, should include granting indigenous
populations property rights over their cultural heritage as well as local biodiversity. In
part, this is intended as a way of affirming the primacy of group rights over individual

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19 At its seventh meeting (Nov. 2001), SBSTTA undertook its first assessment of status and trends on forest
biodiversity.

20 As expressed by Vandana Shiva: “[S]overeign biodiversity property rights, embodying both biological and
intellectual heritage have to be formalised and protected as existing prior to intellectual property rights. The
latter can exist only where they do not infringe on the former, otherwise it becomes an infringement and
violation of sovereignty.” See V. Shiva, The Draft Biological Diversity Legislation: an Anti-National, Anti-
People Law, mimeo (Nov. 1997) at 3.
rights and protecting the survival, welfare, and integrity of these communities; in part by ensuring that they do not lose access to biodiversity resources in the name of conservation or through specific access and benefit-sharing arrangements between the state and industry. As currently contemplated, biodiversity would be “co-owned” by the state and local communities. Some representatives of these communities seek not only to control access but also the use of their knowledge, and claim that these communities should be compensated for past instances of “biopiracy.” In the short term, they ask for a moratorium on bioprospecting as long as the nature of the arrangements and the relevant rights of indigenous communities have not been precisely defined and in an equitable manner.

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 and conservation (for example, the need to change traditional practices detrimental to biodiversity, on the one hand, and the need to harness local socio-cultural forces through participation to protect biodiversity, on the other)? In the Cartagena Protocol, the Advanced Informed Agreement (AIA) procedure aims to strike a balance among economic, social, cultural, and environmental objectives through its shared decision making procedures. Multi objective success will require genuine commitment to use AIA procedures for more than trade convenience. All good things do not always go together.

2. The implementation of the CBD

The number and range of obstacles to the full implementation of the regime are vast; indeed, it would be illusory to attempt to list them all in this article, and presumptuous, at this stage, to assess their relative importance. Nevertheless, we can examine a few of the more salient examples, distinguishing between implementation at the regime level and at the national level.

2.1. 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) or an “umbrella” (coordinating existing agreements) convention. 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 IGOs (Food and Agriculture Organization (FAO), International Tropical Timber Organization (ITTO)), the diversity of states’ interests, the reluctance to favour one set of norms (embodied by the CBD) over another (promoted by FAO) — which reflects, in part, the interests of different constituencies (ministries for the Environment and conservation NGOs on the one hand versus ministries for Agricultural and Forests and the forest private sector on the other) —, states have favoured discussing these issues in special international forums (such as the Intergovernmental Panel on Forests/International Forum on Forests and the UN Forum on Forests). Nevertheless, at its third meeting, the Conference of the Parties requested that the Executive Secretary develop a focused work programme for forest biological diversity and SBSTTA considered this item in November 2001. The work programme on forest biological diversity was adopted at COP-4 (Decision IV/7) and focuses on research, cooperation and the development of technologies necessary for the conservation and sustainable use of forest biological diversity. However, at its fifth meeting, the COP, in its Decision V/4, decided to expand the focus of the work programme from research to practical action. The elements of such an expanded work programme were proposed by an Ad hoc technical expert group on forest biological diversity and adopted by SBSTTA at its seventh meeting (November 2001), which forwarded them to COP for consideration at its sixth meeting (April 2002).  

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, such as the International Liaison Group (ILG) on the Convention and Bionet (a consortium of US NGOs). 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 (World Conservation Union-IUCN), and 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. In general, however, its action has concentrated on coordination with other bodies.

Indeed, the COP and SBSTTA have repeatedly urged the Secretariat to pursue cooperation with other IGOs. The three Rio agreements advocate synergistic approaches and call for information-sharing and a division of labour to avoid duplication of efforts (Articles 16–18 of the CBD and Articles 20–22 (I) of the UNCCD). The UNCCD, for example, also a sustainable development convention, takes an ecosystem approach (drylands)

25 J.-P. Le Danff, personal communication.
and places great emphasis upon livelihoods, local knowledge, decentralisation, and community participation.\textsuperscript{26} The potential for operative synergies with the CBD is therefore important, although translating these initiatives into substantive programmes of work has been slow.

Accordingly, the number of Memoranda of Cooperation and Memoranda of Understanding signed has grown steadily, but most have yet to be translated into effective action.\textsuperscript{27} In some cases, this cooperation is complicated by the 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 cooperation 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. It is worth noting, in this regard that although the implementation of the Jakarta framework of action requires close collaboration with UNCLOS no Memorandum of Cooperation had been signed with this organisation six years after the adoption of this mandate in 1995.

Cooperation is complicated by the fact that although the CBD is only a framework convention (rather than an umbrella one), it is dependent on cooperation 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 harmonisation of the new principles it embodies with the norms and rules of international law found in previous agreements. Successful cooperation rests on the capacity to harmonize these different norms. Therefore, it is not surprising to see that the first coordination efforts were undertaken with the Ramsar convention,\textsuperscript{28} which shares with the CBD a common ecosystem-centred perspective. The Ramsar Convention anticipated much of the conservation approach of the CBD:

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[It] defines wise use or sustainable utilisation as “the human use of a wetland so that it may yield the greatest continuous benefit to present generations while maintaining its potential to meet the needs and aspirations of future generations”…[and] acknowledges that wetlands constitute a resource of great economic, cultural, scientific and recreational value that should be maintained. By stating in its provisions that “listed sites do not necessarily require protected area status, provided their ecological character is maintained through a wise use management approach” the convention acknowledges that conservation of biodiversity does not necessarily mean precluding human economic activities. [Thus, a]s early as January 1996, the Ramsar Bureau (the Secretariat of the Convention) and the CBD Secretariat prepared the ground
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\textsuperscript{26} For participation, see inter alia Articles 3(a), 4, 6(d), 10(2), 16(b), and 19(1); decentralization: Articles 4(2) and 8; local knowledge: Articles 16(g), 17(c) and 19(1); and livelihoods: Article 10(3).

\textsuperscript{27} The Secretariat has entered into Memoranda of Cooperation with the Ramsar Convention, CITES (Washington Convention), CMS (Bonn Convention), IOC, World Bank, IUCN, Cartagena Convention, UNESCO, UNCTAD, CCD, WCMC, DIVERSITAS, CPPS, GISP, Pan-European Biological and Landscape Diversity Strategy, Bern Convention, and the Center for International Forestry Research For Scientific and Technical Cooperation.

\textsuperscript{28} “Convention on Wetlands of International Importance especially as Waterfowl Habitat” (Ramsar Convention), Feb. 2, 1971.
for developing technical co-operation which is seen as a model MEAs [Multilateral Environmental Agreements] co-operation of purely scientific nature.29

In contrast, although the conservation object of the Convention on International Trade of Endangered Species of Wild Fauna and Flora (CITES)30 and the CBD could not appear closer, cooperation 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.”31 Coordination and harmonization becomes 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 Convention and the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS).32 In the case of trade rules, the complexity of the task is clearly made apparent in the efforts of the Cartagena Protocol on Biosafety and the International Treaty on Plant Genetic Resources for Food and Agriculture (IT) to reconcile environmental protection, human welfare, trade liberalization, and property rights.33 It is also worth mentioning that the secretariats of the CBD and UNFCCC have not yet signed a MOU despite numerous inter-linkages between both conventions and repeated calls by the CBD-COP (COP5) to take biodiversity concerns into consideration in the implementation of the UNFCCC and its Kyoto Protocol. These questions of coordination are important for the effectiveness of the CBD, for which the Secretariat shares responsibility with the other institutions of the governance system. Not only could administrative changes be made within the Secretariat, but it is also 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 realise that coordination begins at home.

SBSTTA was the first, and remains the most important, subsidiary body of the Convention. This underscores the importance negotiators originally placed on the development of scientific knowledge for biodiversity. In many ways, the absence of consensual scientific

31 See Ovejero, supra note 29.
32 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 fulfill the requirement of novelty that underpins patents rights: see T. Urs, *The CBD, the WTO and FAO: The Emergence of Phytogenetic Governance*, in Le Prestre, supra note 8.
33 The International Treaty on Plant Genetic Resources for Food and Agriculture (the former “International Undertaking”), signed on November 3, 2001, in effect implements several principles of the CBD and marks a new era in the multilateral negotiations regarding food security and agriculture. It is basically a framework agreement that seeks to reconcile the interests of the plant breeders industry and of local farmers. Under the treaty, the former obtain access to plant genetic resources, as well as a far-reaching protection of the intellectual property used in their breeding efforts; the latter (which includes holders of traditional knowledge, nations or indigenous communities where these genetic resources are found) can claim a share of the proceeds from these breeding efforts. The US and Japan were the only two non-signatories.
knowledge in support of the work of the Convention has been seen as one of its greatest shortcomings. Scientists and many environmentalists have bemoaned the slow development of indicators of performance that would supposedly 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, have feared that these indicators would reflect only northern priorities and could be used to determine eligibility for financial and technical assistance. This question is not new, for it was at the heart of the controversies surrounding the establishment of lists of globally important species and areas during the negotiations of the Convention. This initiative was ultimately abandoned despite the protests of some countries (such as France) who have since been trying to revive it in one form or another.

Rather than attempting to develop scientific indicators that assess the CBD's effectiveness in terms of outcomes (measuring the correlation between the CBD and improvement in biodiversity protection), one should first seek to emphasize indicators that reflect a political definition of effectiveness, one centred upon assessing to what extent relevant actors and stake-holders have changed their behaviour as a result of the existence of the regime and in line with its objectives. In addition, although the ecosystem approach has been further described and developed, it needs greater operationalization, and its implementation, particularly its participatory dimension, remains complex.

The problems that SBSTTA has encountered (namely, heavy workload, uncertainty about its role, poor coordination 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. The first significant scientific initiative has been the Global Taxonomic Initiative (GTI), which aims to remove taxonomic obstacles to data collection and the development of knowledge. In 2000 (decision V/9), the COP established a Global Taxonomy Initiative coordination mechanism to assist the Executive Secretary in the facilitation of international cooperation and coordination of activities under the Initiative.34 A second significant scientific program undertaken by SBSTTA was the assessment of the status and trends of, and major threats to, forest biological diversity in 2001. However, 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, legitimates 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.

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34 The CBD participates in the UNEP/IUCN World Conservation Monitoring Centre, in Cambridge (UK), which became a UNEP Centre in 2000. The WCMC is contributing significantly to the development and dissemination of knowledge and to the harmonization of procedures of biodiversity-related agreements, such as harmonization of national reporting.
In response to initiatives by scientists, and in light of the experience of the Intergovernmental Panel on Climate Change (IPCC), 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. These initiatives include the *Global Biodiversity Assessment*, the *Pilot Assessment of Global Ecosystems* (PAGE), the *Millennium Assessment of Global Ecosystems*, and the *Global Biodiversity Information Facility*, an OECD initiative designed to promote access to existing information related to biodiversity.\(^{35}\)

In one sense, these developments may be interpreted as a failure of the regime to develop the knowledge it needs, combined with an attempt to reduce the CBD to its first objective of conservation, at the expense of sustainable use and benefit-sharing. But this view would be short-sighted and would assume that the CBD regime can be effective or successful only if it centralizes the production of knowledge. Rather, they could also be interpreted as an outcome of the work of the CBD, which has highlighted gaps in knowledge, expressed needs for such knowledge, struggled with lack of baseline data, and made these programmes all the more relevant because the CBD exists. Nonetheless, the CBD will have to ensure that these initiatives support the goals and approach of the Convention (by taking due account of socio-economic factors, for example), and that knowledge advances in a balanced way that addresses issues relevant to all of the Convention’s objectives. It also means that SBSTTA will have to focus on its role of adviser: providing suggestions to external scientific panels, and translating scientific knowledge into possible CBD actions in light of the principles and priorities of the Convention. One of the challenges will be to develop mechanisms to ensure that SBSTTA both has input into the problématique of these scientific initiatives and can use their results effectively.

Rather than focusing on the development of fundamental knowledge, the Convention emphasizes national implementation, raising awareness among Parties, and the development of a set of common tools. Apart from technology transfers and additional financing, the Convention places particular emphasis on scientific cooperation, economic tools, impact assessments, participation, negotiation with relevant stakeholders (with particular emphasis on indigenous and local communities), indicators, and the development of the ecosystem approach. The development of these tools, however, has been more difficult.

\(^{35}\) The *Pilot Assessment of Global Ecosystems* (PAGE) was launched in 1999 by the World Resources Institute (WRI), UNDP, UNEP and the World Bank, with the support of the FAO and the World Conservation Monitoring Centre (WCMC). Its conclusions were published in 2000. The main purpose of the Millenium Ecosystem Assessment is to improve the management of ecosystems and our understanding of their contribution to human development through the identification of the state of knowledge on the goods and services they provide. The first assessment will cover the period 2000–2003. The Global Taxonomy Initiative (GTI) was launched after the realization that serious gaps in taxonomic knowledge, a shortage of taxonomists and of qualified collection specialists affected the capacity to conserve and manage global biodiversity. The GTI aims to promote the examination of taxonomic obstacles to data collection and the development of knowledge. The establishment of a Global Biodiversity Information Facility was proposed by the OECD in 1999. Other established programmes and organizations that compile and maintain biological information resources include the World Conservation Monitoring Centre, DIVERSITAS, Species 2000, and the Integrated Taxonomic Information System of the United States. See UNEP, *Cooperation with Other Bodies* (1999) (UNEP/CBD/SBSTTA/5/2) for background information.
than previously assumed. As usual, technology transfers and financial resources have remained far below expectations. 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. Few have done so, which may be a reflection of the lack of direct impact of the CBD on national scientific research. But there has also been little appreciation of the methodological aspects of this approach: the mere collection of case studies has little value if their methodological underpinnings and the bases for comparisons and lesson-drawing are open to question. 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 “lessons-cum-dogmas” and less on the “software” and on building a range of options derived from existing lessons learned.36 In a similar vein, the operationalization of AIAs, raises practical difficulties that go beyond technical fixes and touch on fundamental issues of inequalities.37 Finally, the very notion of “expert knowledge” has been too narrowly defined in post-agreement negotiations, thereby resulting in, for example, insufficient support for education and public awareness activities.38

2.2. 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. Implementation of the Convention primarily occurs at the national level and, 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.” This embodies application of the principle of subsidiarity, whereby responsibility for the implementation of the Convention’s provisions is transferred to the level that can do it most efficiently.39 Strengthening not only national but also local capacities is thus a prerequisite to effective implementation of the Convention. Although this has traditionally been defined as the capacity to respond to the expectations of the regime in terms of legal, administrative, and scientific infrastructure and the adoption of the tools identified in the Convention, it must go beyond this top-down approach to include the development of capacities to define interests and policies on the basis of local and national experience and priorities.

It is at the national level that the CBD will succeed or fail. From the outset, the COP has identified capacity-building as a priority, including human resources development and institutional development (Decision I/2). The Secretariat has worked with governments and non-state actors (World Conservation Union, World Bank, United Nations Develop-

36 On the evolution of the approach to capacity-building, see G. Paoletto, Capacity Building Systems for Inter-Linkages, prepared for: Inter-Linkages — International Conference on Synergies and Coordination between Multilateral Environmental Agreements, United Nations University, 14, 15 and 16 July, 1999.
37 Wolf, supra note 24.
38 McGraw, supra note 13.
39 Overejo, supra note 29.
to launch a series of efforts to support the work of the CBD on capacity-building. Yet, a lack of capacity in developing country Parties remains one of the biggest constraints on development of the principles of the CBD and their implementation. A certain number of capacity-building issues find easy illustrations in the context of the CBD. Many of these problems affect not only developing but also industrialized countries. They include:

- Uncoordinated administrative structures, divided and competing levels of administrative authority. This poses 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.
- Uneven participation in international forums by developing country experts on MEAs. Reasons range from a lack of information and networking, through limited resources for participation (often dependent on last minute ad hoc funding from industrialized countries), 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 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 (a national Strategy but no endangered species legislation for example; 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 Convention, 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. In the Cartagena Protocol, the AIA procedure requires effective contributions from both trade initiators and recipient countries to protect biodiversity.

Assessment is made more difficult by shortcomings in national reporting, either because reports are not filed on time or because their contents differ widely, making comparisons difficult. 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. Regarding the timeliness of filing reports, by June 2001, only two-thirds of the Parties had filed their first report, which was due in 1998; and only 22% had submitted their second report on time (2001). Compliance with deadlines for filing thematic reports is even worse, but due account has to be taken of the fact that these reports are not felt to be equally pertinent by all countries. On the other hand, most countries have now adopted

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40 See also Paoletto, supra note 36, at 5.
41 See UN ECOSOC, supra note 7.
a national strategy and action plan (Sweden and the UK as early as 1994, Canada, Japan, and Vietnam in 1995), a process, in the case of developing countries, heavily facilitated by financial support from the GEF. In certain cases, however, these strategies were only pro forma exercises. In many instances, rather than evincing national priorities, these documents were 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 under-development 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, the Canadian federal government still falls short of putting its biodiversity commitments into effect. 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 prevents the development of integrated initiatives on the part of the different authorities responsible for biodiversity. In other cases, many developing countries, such as Madagascar, are confronted with potential or actual contradictions among international norms, and between these norms (or current received wisdom) 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, masks deep conflicts within the national elite. One illustration of these difficulties, found both in Canada and 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 ecosystem, species and genetic biodiversity, of benefit-sharing, and of sustainable development, which are too often 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 all likelihood, 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 more open to question. Likewise, 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

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42 P. Halley, Development of Canadian Policy and Protection of Marine Diversity, in Le Prestre, supra note 8.
43 Hufty and Muttenzer, supra note 8.
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. Strengthening the legitimacy of the CBD is even more of a 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 states 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 development. 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-area and of the Convention itself. For example, many conservationists will criticize the focus on sustainable use; industry of technological transfers; indigenous populations, the hegemony of western science; some governments, the role of indigenous populations; scientists, the nature and operation of SBSTTA. Legitimacy will depend on the performance of the CGS in pursuing the principles and objectives which found its authority 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 programme.

3. Toward a new order?

The beginning of the 21st century is characterized by rival yet complementary paths toward human welfare, each representing an incipient world order. The CBD represents such a claim 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 (conservation of aesthetic and recreational pleasure, sustainable development, exploitation of genetic resources). The philosophical and political implications of the CBD are not necessarily benign. The second decade of the CBD will demonstrate whether it was the first step toward the affirmation of new norms and a new reallocation of rights, or whether other competing and no less legitimate orders will constrain it to a marginal role in defining the common good. So far, the prognosis remains guarded.

Yet, the CBD has the potential of profoundly reshaping the relationships between humans and nature and among states, as well as the distribution of social, cultural, political and economic rights, responsibilities, and benefits within states. Through its preamble and articles, the CBD 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 management of this duality, conservation and sustainable use (two objectives that are not as complementary as the Convention often assumes), will be one of the greatest challenges to the implementation and acceptance of the regime.

The Convention also illustrates a general movement of enclosure or re-appropriation of nature by the state and by 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, not its common heritage. Indeed, the Convention takes up and goes far beyond Principle 21 of the 1972 Stockholm Declaration, which declared that states have the sovereign right 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, who 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 a new international order. Some factors promote its advancement, such as 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, such as institutional fragmentation without coordination, conflictual 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; many bridges have to be built for the principles and objectives of the CBD to be given meaning and reality. 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.