Global Governance of Biodiversity

New Perspectives on a Shared Challenge

Raphaël Billé
Emma Broughton
Lucien Chabason
Claudio Chiarolla
Mireille Jardin
Gilles Kleitz
Jean-Patrick Le Duc
Laurent Mermet

December 2010

Health and Environment Reports n° 6

les rapports ifri

The Institut français des relations internationales (Ifri) is a research center and a forum for debate on major international political and economic issues.
Headed by Thierry de Montbrial since its founding in 1979, Ifri is a non-governmental and a non-profit organization.
As an independent think tank, Ifri sets its own research agenda, publishing its findings regularly for a global audience.
Using an interdisciplinary approach, Ifri brings together political and economic decision-makers, researchers and internationally renowned experts to animate its debate and research activities.
With offices in Paris and Brussels, Ifri stands out as one of the rare French think tanks to have positioned itself at the very heart of European debate.

The opinions expressed in this text
are the responsibility of the authors alone.

ISBN: 978-2-86592-811-8

Ifri
27, rue de la Procession
75740 Paris Cedex 15 – France
Tel: +33 (0)1 40 61 60 00
Email: ifri@ifri.org

Ifri-Bruxelles
Rue Marie-Thérèse, 21
1000 Bruxelles – Belgique
Tel: +32 (0)2 238 51 10
Email: info.bruxelles@ifri.org

Internet Website: *Ifri.org*

THE HEALTH & ENVIRONMENT REPORTS

The “Health and Environment: from Safety and Security Issues to New Governance Options?” programme of Ifri seeks to elucidate the linkages that can exist between health and environmental issues and security considerations, and to analyse the impacts of such linkages in terms of efficiency and of the governance options available to international actors. The programme also wishes to stimulate a wider debate within the global civil society and bring to the fore innovative perspectives on these issues, through the linking together of practitioners within a dedicated network.

As part of the Health and Environment programme of Ifri, a minimum of three case-studies on global health and environmental issues are published each year: the *Health & Environment Reports*. All reports have an empirical, comparative and policy-oriented approach, and comprise:

- An empirical analysis of the health and/ or environmental issue under study;
- A prospective analysis of the future developments of the issue under study;
- Policy-oriented recommendations.

The Health and Environment programme of Ifri
is supported by the Taipei Representative Office in France.

TABLE OF CONTENTS

INTRODUCTION

Emma Broughton[1]

The Year 2010 was established as the International Year of Biodiversity by the United Nations. This marked the high point of the process by which biodiversity emerged as a central issue on the international agenda, on par with climate change. The year was ripe with events and meetings and saw progress on a number of issues such as the IPBES, REDDS, ocean acidification, etc., and it probably took advantage of the disenchantment in the climate sector that followed the December 2009 Copenhagen conference. The year culminated in October with the 10th meeting of the Conference of the Parties (COP) to the Convention on Biological Biodiversity (CBD), which infused new confidence in the multilateral process.

Biodiversity's rise to a higher level of importance on the international agenda calls into question the global governance that surrounds it. In her paper, Mireille Jardin defines global governance as

> *the set of rules, norms and decision-making processes elaborated and/or implemented at the global level to order and regulate the actions of citizens, firms and states in a given domain.*

The objective of this report was therefore to provide a **first mapping of the existing and emerging global governance framework in the area of biodiversity**: What are the rules and norms in existence? Through what decision-making processes are they elaborated? Who are the actors and how do they relate to each other? The complexity of such a task was immediately made apparent by the fragmentation of the field – the global governance of biodiversity, as exposed in Mireille Jardin's paper, is refracted in a number of different arenas. The objective thus became to present **different visions,**

---

[1] Health and Environment Programme, French Institute for International Relations.

or perceptions of the global governance of biodiversity, through the participation of authors from different backgrounds.

3 PAPERS, 3 VISIONS…

The first paper, written by former UNESCO civil servant Mireille Jardin, provides an account, in historical and legislative terms, of the rules and regulations ordering the actions of states in the field of biodiversity. This account also proposes an interpretation of the evolution of regulations in the field of biodiversity, perceived as having progressed in three successive phases, following changing perceptions of nature and of the best way to govern biodiversity at the global level.

The paper gives a thorough understanding of the legislative framework structuring the governance of biodiversity, of the interaction between the CBD and the "small" sectoral conventions, pointing to the limits and the advantages of such an organisation.

The second paper, written by researchers Raphaël Billé, Jean-Patrick Leduc and Laurent Mermet, focuses on the target-setting strategy of the CBD. In 2002, the CBD outlined the "2010 Biodiversity Target", which aimed to reduce significantly the rate of biodiversity loss by 2010.

The paper's starting point is the absence of significant critical thinking on the validity or workability of the target-setting strategy for biodiversity governance. It is structured around two *problématiques.* Firstly, the issue of responsibility: who commits to what and to whom? According to the author, the field of biodiversity governance suffers from a responsibility dilemma: actors that are accountable for the progress or the failure in the protection of biodiversity cannot be held responsible for it, while actors that have the most responsibility in biodiversity degradation often cannot be formally held accountable for it.

Second, the question of the aims of the (biodiversity) objectives: what was the 2010 Biodiversity Target supposed to achieve on the ground? If targets are not met, are they still useful? In other words, what is the value of target-setting as a public policy tool?

This analysis delves on the origins of the target, and the rationale and context that led to its adoption. It identifies New Public Management, a "heterogeneous body of ideas

and recipes inspired by economic and management theories,"[2] as an important influence. It follows, according to the author, that for target-setting to be an effective strategy, responsibilities for the achievement of objectives should be clearly allocated to actors. The final section of the paper analyses the new 2020 targets, adopted at Nagoya, in light of this analysis.

The third paper serves as a conclusion to the present report. A joint work by Raphaël Billé, Gilles Kleitz from the French Development Agency (AFD), Lucien Chabason and Claudio Chiarolla both from the Institute for Sustainable Development and International Relations (IDDRI), this paper provides an insightful analysis of the 2010 International Year of Biodiversity, examining in more depth the last COP meeting in Nagoya.

The paper builds on the contrast between the vitality of the field of biodiversity governance and the unrelenting pace of biodiversity degradation, leading the authors to question our collective capacity to reduce the weight of our societies on the environment. A number of intricate and complex causes are at the root of this hindrance, amongst which the difficulty in effectively reconciling economic growth and practises, and environmental protection.

New and innovative governance relationships therefore have to be developed in order to improve the effects of our actions on the state of biodiversity, through mainstreaming and fitting the means dedicated to the protection of biodiversity to the commitments taken.

The three papers thus provide very different visions of the global governance of biodiversity. Their scopes, both in time and in terms of their subjects, vary greatly: the first paper provides an institutional framing of the global governance of biodiversity, accounting for the international rules and regulations in existence through a historical and juridical account; the second paper focuses on the CBD only, and specifically on its target-setting policy, giving a picture of the global governance of biodiversity as it has been practised in the past decade; the third paper reports on the year 2010, which marked the International Year of Biodiversity, and the last meeting of the Parties to the CBD that took place in Nagoya in October 2010.

---

[2] P. Bezes, "Le renouveau du contrôle des bureaucraties. L'impact du New Public Management", Informations sociales, vol. 126, 2005, pp. 26-37, *in* R. Billé, "Global biodiversity targets: Vain wishes or significant opportunities for biodiversity governance?" *this volume.*

SHARING COMMON THREADS

Despite such different standing grounds, some common threads run through the three papers. Amongst these is the acknowledgement of the limitations of the framework of global biodiversity governance. All three papers point to the implementation gap that exists between what is committed to as part of international agreements, and what is actually achieved on the ground.

This state of affairs is not the result of a single cause, as pointed out by the authors of the third paper, but rather borne out of

> *gaps in the scientific knowledge on biodiversity, the weakness of the science-decision-making interfaces and of the implementation of regulations, lack of political will, absence of economic incentives, insufficient implication of civil society, and a shortage of financing...*

One factor that is dealt with more in-depth is the weakness of compliance mechanisms monitoring the implementation, at the national level, of the commitments taken. Moreover, and as exposed in two of the articles, actors accountable for biodiversity degradation are not responsible for it, while those that are cannot be held accountable under the law for their actions.

The issue is not new, but it has come under the limelight in the past couple of years as the deadline for the 2010 biodiversity targets passed without the objectives having been met. The issue thus becomes one of finding a way to incentivise compliance with international environmental agreements: how can the behaviour of the actors that have an impact on biodiversity be influenced to comply with the commitments taken?

Different strategies are proposed. The two first papers suggest the use of “naming-and-shaming” as a method of enabling compliance. The first paper insists on the importance of monitoring and reporting mechanisms as a way of stimulating compliance, and touches upon economic valuation as a promising incentive for action. The second paper identifies the clear allocation of responsibilities as a prerequisite for compliance, within a target-setting strategy.

Another thread that runs through all three articles, and which follows from the previous one, is the commitment to work from within the existing multilateral governance framework.

In the climate sector, a solution to palliate the limitations of the global governance framework has been put forward more forcefully in the wake of the Copenhagen conference. It has been argued by some that the UN negotiation system, whose

voting-rules requires unanimity between all of the Parties to the conventions (close to 200), is victim to a least-common denominator syndrome that excludes the possibility of ambitious and binding agreements. Instead, it is argued, negotiations should be carried out within smaller groups of like-minded countries or of countries with common interests or characteristics. Such a negotiation process would increase appropriation by participating actors, and thus increase the probability of agreement, and of compliance.

International biodiversity negotiations are less exposed to a legitimacy crisis today than the climate negotiations, but they also suffer from a structural inability to bring about ambitious agreements. Participants arriving in Nagoya were fearful of falling victim to the "Copenhagen syndrome", and indeed the text of the Protocol on Access and Benefit Sharing (ABS) that was adopted at the conference, although an achievement considering the difficulty of the negotiation, is a watered down version of the original one *(see paper by R. Billé and G. Kleitz, this volume).*

Moving away from the multilateral system is a tempting option. It promises speedy and more efficient negotiation processes, and the possibility of quicker implementation. However, such a strategy also risks diminishing the environmental efficiency of actions taken, as well as upsetting the fragile equity equilibrium between developed and developing countries; between the countries most vulnerable to biodiversity degradation or climate change, and the others. As mentioned by the authors of the third paper, the right balance probably lies in the development of new tools and new collaborations between actors at the sub-national level, who can propose operational solutions to help in the transformation of behaviours, under the umbrella of an inclusive multilateral governance framework guaranteeing equity and a strategic vision. And indeed, the positive achievements of the recent COPs in Nagoya and Cancun, in October and December 2010 respectively, have reinjected confidence in the multilateral process.

The picture of the global governance of biodiversity given here is far from being complete. A great variety of other subjects and themes could have been touched upon, and, as outlined above, the role of non-state actors and of governance networks established outside the state is bound to be central in biodiversity governance. This report provides a clean starting ground for such an exploration.

GLOBAL BIODIVERSITY GOVERNANCE: THE CONTRIBUTION OF THE MAIN BIODIVERSITY-RELATED CONVENTIONS

Mireille Jardin[1]

INTRODUCTION

Global governance can be defined as the set of rules, norms and decision-making processes elaborated and/or implemented at the global level to order and regulate the actions of citizens, firms and states in a given domain. Global governance typically operates in domains where governments are not sovereign; such as global biodiversity degradation, but also climate change mitigation, international trade regulation, etc. Such rules, norms and processes can be developed by and between states, but can also involve non-state actors including firms, NGOs or international organisations.

The present paper will focus on the rules and regulations that aim at ordering the actions of sovereign states in the biodiversity domain, namely biodiversity-related conventions. These conventions, steered largely by the nation-states themselves, set up rules and regulations that state parties commit to respecting.

---

[1] Former UNESCO civil servant.

AN EVOLUTION IN SUCCESSIVE PHASES

At a global level, the "biodiversity-related conventions", can be considered to have evolved in three distinct phases.[2] The first generation of tools, developed in the seventies, are based on a sectoral approach, focusing on specific species or habitats in view of their perceived importance or fragility. Within this category are the World Heritage Convention (WHC), the Convention on Wetlands of International Importance (Ramsar Convention), the UNESCO World Network of Biosphere Reserves, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and the Convention on the Conservation of Migratory Species of Wild Animals (CMS). These conventions were elaborated and implemented successively, often complementing each other. Even so, considerable gaps remained, particularly in the protection of habitats. At the time, the only attempt to cover all types of ecosystems, whether exceptional and threatened or not, was made by the World Network of Biosphere Reserves.

These first generation conventions were mainly devoted to the promotion of biodiversity conservation, with the exception, once again, of the World Network of Biosphere Reserves, whose concept of biosphere reserves combines conservation with the sustainable use of natural resources.

The second generation of instruments expressed an evolution towards a more generic and broad scope of action, enshrined in the adoption of the Convention on Biological Diversity (CBD) in 1992. It reflected a shift in the conception of the protection of nature, from the protection of "exceptional" nature to the protection of "ordinary" nature. The shift from an approach focusing on endangered species or specific

[2] By dealing essentially with global treaties, this paper in no way intends to underestimate the role of regional conventions, such as those elaborated in the frame of the Regional Seas Programme of UNEP or by regional organisations, such as the Bern Convention of the Council of Europe. Furthermore, this paper does not address the global biodiversity governance issue of the biodiversity of the high seas , currently the subject of much international debate (see for example the international seminar "Towards a new governance of high seas biodiversity" organized by IDDRI – Institut du Développement Durable et des Relations Internationales - at the Principality of Monaco, on the 20th and21st of March 2008). This issue was also discussed during the Third Global Conference on Oceans, Coasts, and Islands, held from the 23rd to the28th of January, 2010, at the UNESCO headquarters. Further work by an open ended group of experts will continue. The need for an international agreement on high sea areas and resources lying beyond national jurisdictions is acknowledged, and there is a general feeling that the United Nations Convention on the Law of the Sea (UNCLOS) will provide the basis for such an agreement.

habitats, to a global concept including ecosystem services is reflected for example in the definition of biodiversity established in Article 2 of the CBD:[3]

> *Biological diversity means the variability among living organisms from all sources including, inter alia, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.*

Furthermore, the CBD not only approaches the issue of biodiversity from the point of view of the conservation of existing resources, but for the first time, also through the idea of sustainable use and the access to and sharing of the benefits drawn from them. The Treaty on Plant Genetic Resources for Food and Agriculture (2001), for example, was established in the footsteps of the CBD and this second generation of instruments, addresses the issue of access and benefit sharing.

In contrast to those within the first generation, the CBD is not limited in its scope. Rather, the CBD was conceived to deal with the biodiversity issue in a holistic way, setting new principles and new global ambitions for its protection. The wide breadth of this ambition explains the difficulties encountered in implementing it, although it must be recognised that significant progress has been made in recent years on this front, specifically with regards to the promotion of national strategies and the adoption of guidelines and principles by the Conference of the Parties.

Finally, a third type of instrument is currently emerging, one that is neither sectoral nor global in scope, but rather aims to improve the scientific basis for decision-making on biodiversity issues, and to give these issues a higher profile on the international agenda. The Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES) should officially be created by the General Assembly of the UN in the coming months. The IPBES is expected to play a role in biodiversity research similar to that of the International Plant Protection Convention (IPPC) in climate change.

[3] The use of the term 'biodiversity' is relatively recent. The term was introduced in 1986 by Edward O. Wilson, and has replaced and specified notions such as nature protection or conservation, natural resources conservation and use, etc.

STRUCTURE, ORGANISATION AND ISSUES

The functioning of the different conventions have several similarities, which can be described as follows:

- They are all directed at sovereign states, but only at those that have accepted the convention text, through the signing and ratification of the text.
- The Conventions are governed by a Conference of the Parties (COP), with the exception of the World Heritage Convention that is steered by the World Heritage Committee, an intergovernmental body composed of 21 members and elected by the General Assembly of the state parties.
- Executive bodies are set up to represent the COP between sessions: either standing committees, in the cases of CITES, Ramsar, CMS, or the Bureau of the COP.
- A Secretariat, whose staff varies according to the Convention at hand, has the role of implementing the decisions of the COP.
- Advisory scientific bodies provide expertise to the Conventions.
- NGOs, and in particular the International Union for Conservation of Nature (IUCN), play a central role in the elaboration and implementation of the Conventions.
- A budget fed with mandatory contributions from state parties generally covers the functioning costs of the Convention, as well as the costs of the Secretariat staff. The World Heritage Convention is an exception, as its fund was established to support conservation projects. In terms of project funding, the CBD benefits from GEF funding and the Treaty on Plant Genetic Resources has established a Benefit-Sharing Fund. In the case of the other Conventions (Ramsar, CITES, CMS), specific fund-raising strategies for projects are currently being developed.

Each convention provides for a different set of obligations, which are more or less general and more or less binding. In all cases, tools are developed to monitor implementation and encourage state parties to fulfill their obligations. In some cases, sanctions can be applied, which generally consist of publicising the bad record or insufficient efforts made by a state.[4] The central question for all Conventions remains

[4] In some rare cases, there can be the de-listing of World Heritage Sites, but this remains exceptional.

that of the enforcement of the commitments taken in the Convention texts, an issue which ultimately depends on the political will of sovereign member states.

The question of enforcement and effectiveness is all the more difficult that Convention texts often comprise "soft" obligations, which are non-binding and make common use of formulations such as "as appropriate" or "as far as possible". Such weak phrasing was a condition for achieving a consensus on the text during the negotiations of the text. All Conventions have therefore developed sets of guidelines and recommendations that complement the initial provisions comprised in the Convention texts, but which do not have the same strength.

The efficiency of the first generation of Conventions can only be evaluated in view of their limited scope. In other words, they cannot reasonably be blamed for the global loss of biodiversity. Each convention, within its limitations in scope, can claim some successes and results, but can also work towards a more successful and efficient achievement of their potential. Conjunctly, these Conventions have enabled the creation of a set of measures and policies which sometimes overlap but more generally complement each other. Implementation could be improved through a better coordination of their respective activities but also, and crucially, through an improvement of the appropriation of Convention policies at the national level, within the national strategies of states.

To quote Veit Koester, who was involved in most of the negotiation process of the CBD and who chaired the COPs of almost all these conventions:

> *I believe that we can safely conclude that the five global biodiversity-related conventions are in a reasonably good shape (…) and to answer to the question: did we really accomplish anything? I can only answer by posing another question: what would be the condition of our biodiversity if the conventions did not exist?*[5]

ACTORS

Non-state actors have an important role to play in the global governance of biodiversity. First, IUCN (International Union for Conservation of Nature), which has a hybrid status,[6] was at the origin of almost all of the biodiversity conventions and is still

[5] V. Koester, "The Five Biodiversity-Related Conventions", *Environmental Policy and Law,* vol. 31, n° 3, ICEL, Bonn, 2001, pp. 151-156.
[6] The IUCN is an NGO that has a large number of member states.

actively involved in their implementation. In 1980, IUCN, in collaboration with FAO and UNESCO, produced the World Conservation Strategy, a major document which was supported by UNEP and WWF. This document constituted the first global attempt to elaborate a comprehensive strategy in the field of biodiversity conservation. Four of IUCN's Commissions, in which conservation experts from a large number of countries participate, play crucial roles in mobilising the international community in favour of biodiversity and nature conservation. These four Commissions are the Commission on Environmental Law, the Commission on Ecosystem Management (CEM), the Species Survival Commission (SSC) and the World Commission on Protected Areas (WCPA). More specifically, the IUCN Commission on Environmental Law and the Environmental Law Centre in Bonn (Germany) were both at the origin of CITES and CMS, and were instrumental in the early stages of the elaboration of the CBD. Furthermore, the IUCN was also one of the actors involved in the preparation of the WHC in the early seventies. It hosts and manages the Secretariat of the Ramsar Convention, while its technical role in the functioning of the World Heritage Convention (natural sites) is crucial. More generally in the field of biodiversity, several other NGOs such as Wetlands international for Ramsar and CMS, are directly associated to the work of the Conventions, effectively contributing to their implementation.

The main intergovernmental players on biodiversity issues are UNEP, UNESCO and FAO. UNEP was responsible for launching the negotiations that led to the adoption of the CBD. It is currently responsible for its Secretariat, and for the implementation of the CITES and CMS Conventions (see below).

In many respects, UNESCO has played a pioneer role in biodiversity science and conservation since the late 1940s.[7] In 1966, UNESCO was requested by its member states (i.e. by the General Conference) to convene an intergovernmental meeting of experts in the field of "ecological studies and conservation of natural resources." The Biosphere Conference took place in September 1968 in Paris,[8] and was organised by UNESCO in collaboration with the FAO and the WHO, and in cooperation with the IBP (International Biological Programme) and IUCN. This event, which took place four years before the Stockholm Conference, was the first worldwide meeting on global environmental issues. The Man and the Biosphere Programme (MAB) was created as

[7] Among UNESCO's early activities, the organisation played a central role in setting up IUCN (1948) and the Charles Darwin Foundation for the Galapagos Islands (1954), which were responsible for the launching of several major research programmes on arid lands and humid tropics between 1950 and 1960.

[8] Exact title: the Intergovernmental Conference of Experts on the Scientific basis for Rational Use and Conservation of the Resources of the Biosphere.

a follow-up of this meeting. One of MAB's main projects being the "Conservation of natural areas and of the genetic material they contain," the biosphere reserves were thereafter created for this purpose. These reserves now form a World Network of 504 sites in 109 countries (as of June 2010), and their role in biodiversity conservation will be further explored in the body of this paper. Another section of this paper will be devoted to the UNESCO World Heritage Convention adopted in 1972. Finally, this paper will look at the Convention for the Safeguarding of the Intangible Cultural Heritage (2003), as it contributes to the protection of traditional uses of biodiversity.

In its field of competence, FAO also plays a major role, notably through the "Integrated Management of Biological Diversity for Food and Agriculture" programme, which aims at providing support to countries on the management of agricultural biodiversity, the access to and exchange of genetic resources and the strengthening of indigenous knowledge systems. FAO also manages the International Treaty on Plant Genetic Resources for food and Agriculture.

Both FAO and UNESCO are associated to the implementation of the CBD and work closely with its Secretariat.

1. THE FIRST GENERATION OF INSTRUMENTS

The first generation tools are mainly devoted to conservation, although some have evolved to encompass the notion of sustainable use, and they approach the issue of biodiversity sectorally, dealing with habitats or species according to their exceptional value, importance, and fragility. The Word Network of Biosphere Reserves represented the first attempt to deal with all types of ecosystems and to link conservation and biodiversity use.

1.1. INSTRUMENTS DEALING WITH HABITATS

Two global treaties and an international programme deal with the conservation of ecosystems: the World Heritage Convention (WHC), the Convention on Wetlands of International Importance (Ramsar Convention) and the World Network of Biosphere Reserves. Both conventions are based on a system listing areas of focus. The criteria and listing mechanisms of both conventions differ, but the functioning of these conventions presents several similarities. In fact, the development of the Ramsar Convention was inspired by the functioning of the WHC. One of the main effects of banning a site listed as a WHS is that it will bring publicity and prestige to the site, and help attract bilateral or multilateral funding, in particular from the GEF. The recognition of a site also provides access to international expertise and technical support.

1.1.1 Convention concerning the Protection of the World Cultural and Natural Heritage (World Heritage Convention, WHC)

The WHC was adopted in 1972 by the General Conference of the UNESCO. The Convention has 187 state parties. Its Secretariat is managed by UNESCO and located in Paris.

The origin of the Convention goes back to the 1960s when UNESCO, following from the experience of the campaign for the safeguard of the Nubian monuments in Egypt, was exploring different options for the elaboration of an international instrument to

protect the most prestigious monuments of the world. The preparation of a draft was initiated with the help of the International Council on Monuments and Sites (ICOMOS).

The idea of combining the conservation of cultural sites with that of natural sites originally came from the United States. A White House Conference held in Washington, D.C. in 1965 called for a 'World Heritage Trust' that would stimulate international cooperation to protect "the world's superb natural and scenic areas and historic sites for the present and the future of the entire world citizenry". In 1968, the IUCN developed similar proposals for its members. These proposals were presented to the 1972 United Nations Conference on Human Environment in Stockholm. The two projects eventually merged into a single convention that was agreed upon by all parties concerned, and was adopted by the General Conference of UNESCO on November 16th, 1972. For the first time in history, the human heritage was considered both cultural and natural, and the fundamental need to preserve the balance between the two was clearly spelled out.

The Convention, in addition to its acknowledgement of culture/nature interconnectedness, is considered a pioneer in many respects, in particular for its formulation of the notion of a "World Heritage" and the principle of a common responsibility that derives from it, and for the creation of a financial mechanism to support its implementation. The implementation of the Convention and the system of monitoring that has developed over the years has proven to be broadly effective and has inspired the development of the Ramsar Convention on Wetlands.[9]

The definition of a natural heritage is given in Article 2 of the Convention:

[9] C.d. Klemm, I. Créteaux, *The legal development of the Ramsar Convention*, Ramsar Convention Bureau, Gland, Switzerland, 1995, pp. 75-148.

> *For the purposes of this Convention, the following shall be considered as "natural heritage":*
>
> *natural features consisting of physical and biological formations or groups of such formations, which are of outstanding universal value from the aesthetic or scientific point of view;*
>
> *geological and physiographical formations and precisely delineated areas which constitute the habitat of threatened species of animals and plants of outstanding universal value from the point of view of science or conservation;*
>
> *natural sites or precisely delineated natural areas of outstanding universal value from the point of view of science, conservation or natural beauty.*

Criteria have been further defined within the Operational Guidelines for the implementation of the Convention. Among the natural criteria, only Criteria ix and x are relevant to the protection of biological diversity,[10] to which should be added the criteria defining cultural landscapes, often including traditional practices, which contribute to the protection of biodiversity.

Among the two hundred and seven natural and mixed sites inscribed on the World Heritage List, one hundred and twenty nine are inscribed in view of their value for biodiversity. The Convention is, however, obviously limited in its effectiveness by its scope of action circumscribed to sites of universal and outstanding value. More importantly, it is limited by the fact that only states themselves can call for the inscription of one of their sites on the World Heritage List.

Nominations for inscription are made by the state concerned, who prepares an inventory of all the potential World Heritage sites located on its territory. This inventory is called the “Tentative List.” Proposals are evaluated by an independent NGO – IUCN in the case of natural sites – which generally undertakes a field visit to assess the value of the site and its state of conservation and protection. The recognition, in the Convention text itself, of the role of IUCN as the technical reference, is unique. This technical evaluation serves as a basis for the decision to inscribe the site or not on the World Heritage List. Decisions are made every year by the Word Heritage Committee, the latter generally, but not systematically, following the recommendations of IUCN.

[10] ix : “To be outstanding examples representing significant on-going ecological and biological processes in the evolution and development of terrestrial, fresh water, coastal and marine ecosystems and communities of plants and animals”; x: “to contain the most important and significant natural habitats for in-situ conservation of biological diversity, including those containing threatened species of outstanding universal value from the point of view of science or conservation.”

The World Heritage Committee is an intergovernmental body composed of 21 members elected by the General Assembly of the state parties. It must be noted that the WHC is the only Convention that delegates decision-making power to a body other than the Conference of the Parties itself. By creating a more efficient and lighter mechanism composed only of a limited number of member states, the Convention established, from its inception, one of the main conditions for its success.

Another condition for the Convention's success was the creation of the World Heritage Fund. This fund represents approximately US$3.6 million per year supplied by mandatory contributions from state parties and is complemented by important extra budgetary resources (approximately US$11.3 million per year), including a range of partnership agreements. Administrative and staff costs being largely covered by UNESCO's regular budget, the World Heritage Fund is used to assist State parties and financially support the implementation of the Convention. This international assistance can include preparatory assistance (to help prepare nominations), conservation and management assistance (technical cooperation, training and education) and emergency assistance. The World Heritage Fund furthermore finances the technical services of the NGOs (IUCN and ICOMOS).

The obligations of States Parties are outlined in the Convention text, and have been further specified by the Operational Guidelines. General obligations concern the "identification, protection, conservation, presentation and transmission to future generations of its natural heritage" (Article 4). The main obligation, however, relates to the conservation of "the cultural and natural heritage properties situated on its own territory".

In addition,

> *all Parties recognize that these constitute a world heritage which it is the duty of the international community as a whole to cooperate in protecting (…) each Party undertakes not to take any deliberate measures which might directly or indirectly damage the heritage situated on the territory of other Parties. (Article 6)*

The obligation to conserve World Heritage properties becomes effective immediately after a site's inscription on the list. In order for a site to be accepted, it must be legally and adequately protected, and its integrity checked. Criteria for protection and integrity have been further defined in the Guidelines. If the protection is insufficient or the integrity weak, measures have to be taken before the site can be inscribed. This happened in the case of Mount Kenya National Park, which was not allowed onto the list until a comprehensive action plan for its protection was adopted by national authorities.

Once the site is added to the WHL, the state must ensure its protection. The state of conservation of World Heritage properties is regularly monitored. Over the years, the World Heritage Committee has increasingly devoted time and attention to the examination of the state of conservation of listed sites, to the point that this monitoring activity has become the main item on the Committee's agenda in place of the addition of new properties to the World Heritage List. In the event of a threat to the integrity of a site, which can be reported by various sources such as NGOs and individual citizens, the Secretariat requests information from the state concerned. If the threat is confirmed, missions will be sent *in situ* and discussions with the state will be undertaken to elaborate a solution to the problem. The World Heritage Committee will also be informed of the problem and will recommend further measures to be taken for the effective reduction of the threat. The dialogue which is thus set up between the Secretariat, generally with the support of IUCN, and the national authorities, has in many cases resulted in positive and effective problem-solving between the actors.

If the threat is confirmed and important, the site is put on the "WHL in Danger" list, after consultation with the state concerned. This inscription is generally perceived as a tool for attracting support, as it raises the awareness of the public and donors on the situation of the site at hand. This mechanism has proved very useful, sometimes attracting support before a site was even inscribed on the List in Danger. For instance, after a mission of the IUCN and the Secretariat to the Galapagos Islands, the President of Ecuador issued a decree to declare the Galapagos a "National Heritage at risk", and action was taken against invasive species and mass tourism. In parallel, the site was inscribed on the "WHL in Danger" list. The quick progress made during the two years the site spent on the WHL in Danger list led to its de-listing at the WHC's 34th session, in July 2010.[11] In the case of the Everglades, in the US, the site was removed from the WHL in Danger in 2007 after a substantial renovation programme. However, in view of their need for more support, American authorities requested that the site be put back on the List, which was done by the Committee at the WHC's 34th session.

In some cases, however, the state concerned considers the inscription of one of their sites on the WHL in Danger as a sanction, and fights to avoid the Committee decision. Although only consultations with the state are required, it has been common practice not to put a site on the List without the agreement of the state concerned. However, the publicity around the site and the recommendations for improvement issued by the WH Committee can, themselves, help find a solution.

[11] The site's removal from the in Danger list was however perceived as premature by several conservation groups.

Furthermore, there are also cases in which situations created either by natural disasters or by armed conflicts call for vast international action. In such cases, a mobilisation plan can be set up, such as the one set up for natural sites in the Democratic Republic of Congo,[12] which during the civil war had been subject to poaching and deforestation by the large number of refugees (approximately 800,000) that had invaded the sites.

For a site inscribed on the WHL in Danger, a procedure of reinforced monitoring is set up. This procedure includes several measures, such as field missions between Committee sessions, generally undertaken by the President of the Committee with the technical support of the Secretariat and IUCN. The President then reports back to the WHC.

For each site subject to a monitoring report, whether it figures on the WHL in Danger or not, states are requested to report back to the Committee on the follow-up of the Committee's recommendations. Furthermore, in addition to this reactive monitoring, a system for national reporting is provided for by the Convention (Article 29). The Secretariat provides support to the production of these reports on a regional basis by building capacities at the national level. These reports are produced every six years, and are used to identify constraints and build regional programmes.

Cases of de-listing are exceptional. No state to date has been known to ask for the de-listing of one of its sites. Only one natural site and one cultural site have been de-listed so far. The natural site concerned, located in Oman, had lost most of its value due to oil exploitation and its protection was not ensured anymore. The Sultanate of Oman agreed to the de-listing of its natural site.

Overall, the Convention has proved to be a reasonably powerful instrument. The recognition of the World Heritage value of a national site receives strong publicity, stimulating national pride, and provides economic benefits to the country at hand, notably in the area of tourism. The power of the listing mechanism can also be imposed negatively, through the bad publicity arising from the de-listing of a site. In this case, the state in which the site is located can be perceived as failing to honour and fulfill its commitments. Debates of the Committee are followed closely by the media, to the point that it can become a public event in the country concerned and even beyond. The Convention is well known by the general public, and this publicity is an asset for the conservation of the sites.

---

[12] Garamba National Park, Virunga National Park, Kahuzi Biega National Park, Salonga National Park and Okapi Fauna Reserve.

Moreover, World Heritage Sites are considered a priority in the domain of conservation at the national and international levels. They attract funding largely from multilateral or bilateral channels, in addition to the support they receive from the WH Fund.

However, as already mentioned, the Convention is limited in scope and its success, in the end, still depends on the will of the state parties to protect listed sites. The Secretariat, by effectively using its network of experts and through discussions with member states and IUCN, must proactively persuade states to elaborate a tentative List and nominate sites which are of outstanding value in terms of their biodiversity.

1.1.2 Convention on Wetlands of International Importance (Ramsar Convention)

The Ramsar Convention was negotiated in the 1960s by countries and non-governmental organisations that were concerned with the increasing loss and degradation of wetland habitats for migratory waterbirds. The treaty was adopted in the Iranian city of Ramsar in 1971 and came into force in 1975. UNESCO is the depositary of the Convention. As of June 2010, 160 states are Parties to the Convention and 1,890 sites are included in a “Ramsar List of Wetlands of International Importance”, set up by article 2 of the Convention. The Secretariat is managed by IUCN and located in Gland (Switzerland).

Originally focused on waterfowl, the Convention has broadened its scope to cover all aspects of wetland conservation and “wise-use,” recognising the importance of wetlands for biodiversity conservation and for human well-being.

The Convention’s mission is “the conservation and wise use of all wetlands through local, regional and national actions and international cooperation, as a contribution towards achieving sustainable development throughout the world” (COP, 2002). The definition of wetlands is broad as it includes lakes and rivers, swamps and marshes, wet grasslands and peat bogs, oases, estuaries, deltas and tidal flats, near-shore marine areas, mangroves and coral reefs, and human-made sites such as fish ponds, rice paddies, reservoirs, and salt pans.

Parties to the Convention undertake the general obligation to include wetland conservation considerations in their national land-use planning, so as to promote “as far as possible” (Article 3) the wise use of wetlands located in their territory. The “wise use” concept is at the centre of the Ramsar philosophy. It is defined as:

> *the maintenance of the [...] ecological character [of wetlands], achieved through the implementation of*

> *ecosystem approaches, within the context of sustainable development.*

Guidelines have been developed to help parties implement this concept.

More specific obligations concern the protection and wise use of the sites included in the Ramsar List of Wetlands of International Importance: state parties have the obligation to designate at least one wetland for inclusion in the List. Specific attention will be paid to the protection and wise use of these sites. In case of a threat, action can be taken by the Secretariat (see below). Member states also agree to consult with other parties on the question of transboundary wetlands sites and shared water systems. No specific conditions are required to list a site as a transboundary wetland site, except the existence of an ecologically coherent wetland and a formal agreement to cooperate on part of the Ramsar authorities in each of the national parties concerned by the site.

Although the selection of sites is guided by the *Criteria for Identifying Wetlands of International Importance*, the acceptance of a site does not have to go through an independent evaluation or an intergovernmental process, as is the case for WH sites or biosphere reserves. In the case of Ramsar, the Secretariat only ensures that the data and the map provided meet the criteria. In addition, and in contrast to what is done for the nomination of WH sites, the state of conservation of the wetland is not a condition for its listing. This absence of international control obviously makes the Convention weaker compared to WH and to biosphere reserves.

Reporting is not provided for by the Convention itself, but rather by a Recommendation adopted in 1984, which requests Parties to submit detailed national reports to the Secretariat, at least six months before every ordinary meeting of the Conference (every three years). The reports should in particular include changes or threats to the ecological state of the listed sites.

The Ramsar Convention enjoys a high percentage of success in the submission of detailed national reports from states, with 84% of states submitting in 2005. These reports are studied and summarised by the Ramsar Secretariat in the form of regional overviews, which are then submitted to the COP as official working documents. The texts of the national reports themselves are published on the Ramsar Web site. These texts provide a lot of information on the measures taken to implement the Convention, but the exercise in itself cannot give a clear picture of the global status of wetlands. It has often been argued that this reporting system should be strengthened with the use of indicators on the status of wetlands.

Monitoring has developed over the years. The World Heritage sites, for example, frequently organise expert missions (sometimes joint missions for sites which are

listed under Ramsar and WH or as biosphere reserves) to evaluate the state of conservation. These expert missions are especially common in the cases where there is a threat to the integrity of a site. These can be initiated as a response to national reports or to respond to reports received from third parties.

Any contracting party can add further wetland sites situated within their territories to the list and extend or restrict the boundaries of the wetlands that are already included. In the case of the deleting or restricting of the boundaries of wetlands however, there is an obligation to compensate the loss of protected ground through the designation of another area. But again, no authority evaluates or controls the value of the ground proposed for compensation.

Using the World Heritage List in Danger as a model, the Montreux Record was established in 1990. This record is a register of the wetland sites on the List of Wetlands of International Importance, in which changes in ecological character have occurred, are occurring, or are likely to occur as a result of technological developments, pollution, or other human interference. Sites may only be added to or removed from the Record with the approval of the Contracting Parties in which they are situated. The establishment of the Montreux Record has proved to be less efficient than the WHL in Danger however, because it receives less publicity, attracts less funding, and because the Parties are generally reluctant to inscribe sites to this listing as it provides less benefits.

At the request of the contracting party concerned, the Secretariat may send a technical mission, known as the “Ramsar Advisory Mission”, in order to analyse the situation of sites on the Montreux Record, provide advice on the measures to be taken, and assess the desirability of removing a site from the record when measures have been successfully implemented. Advisory missions can also be undertaken following the reception of information from a third party, most commonly a local or national NGO.

In addition to the regular fund which funds the running of the Convention and its Secretariat, a small grants fund has been established to support specific wetland conservation projects. This grant is funded by voluntary contributions, which vary from year to year and are considered largely insufficient to fund projects received by the Secretariat. Additional support, through a partnership with Evian/Danone aims at funding some projects in the mangroves as well as outreach activities (World Wetland Day).

However, in the literature, Ramsar is generally considered to be a success because it has developed a pragmatic approach, promoted wetlands conservation training and capacity-building, and succeeded in raising awareness on the importance of wetlands.

Some have argued, nonetheless, that too much importance has been attached to the listing and adding of new sites, to the detriment of the promotion of the wise use concept in national policies on wetlands. More focus should be put on the development of efforts to reach out to institutions in charge of bilateral and multilateral aid, and alert them to the consequences of specific development projects of wetlands. Unfortunately, despite the more or less satisfactory functioning of the Convention, the global decline of wetlands continues.

1.1.3. Biosphere Reserves (BRs)

Although not a Convention, the World Network of Biosphere Reserves is a major international instrument, which deals with biodiversity in an innovative way. First, its object does not only circumscribe exceptional biodiversity, but also encompasses ordinary biodiversity in all types of ecosystems. Second, unlike the two conventions previously described that demand results – wise use of wetlands for the Ramsar Convention and the protection of predefined sites for the World Heritage Convention – biosphere reserves have an obligation of means. This means that they must respond to specific principles of management, such as zoning patterns, the participation of local populations, the use of scientific research for management, etc. In other words, the adoption of certain management principles are considered to be a prerequisite for the recognition of a BR, and the success of the conservation and sustainable use of biological diversity is seen as depending on the appropriate application of these principles. This obligation of means is controlled through a periodic review process. Experience gained on each site is shared with other BR managers through a networking mechanism. Managers of the BRs know each other, and meet regularly to compare their experiences, failures, and successes.

The World Network of Biosphere Reserves has evolved over the last forty years to become an important international instrument for the conservation of biodiversity and the sustainable use of its components. The relevance of biosphere reserves to global efforts in favour of biodiversity is largely accepted, and they are generally considered one of the best illustrations of the ecosystem approach called for by the Convention on Biological Diversity.

In 1995, the definition of biosphere reserves and their objectives were settled by a major conference held in Seville (Spain), where the Seville Strategy and the Statutory Framework of the Network were elaborated. In the same year, these two texts were further adopted by the General Conference of UNESCO. While the Strategy serves as a guide for Member States in developing their policy on biosphere reserves, the Framework provides criteria and the “rules of the game,” which, although not formally

binding, are respected by all Member States. It took close to two years to negotiate the Framework, and the final text, which was subjected to many amendments, was finally formally adopted by consensus at the Seville Conference. It should be noted that the text of the Statutory Framework has since then been transcribed into several national legislations.

Biosphere reserves perform three complementary functions:

1. **a conservation function**, to preserve genetic resources, species, ecosystems and landscapes;
2. **a development function**, to foster economic and human development which is socio-culturally and ecologically sustainable;
3. **a logistical support function**, which includes environmental education and training, research and monitoring.

It is the equal importance of these three functions and their interconnected role, which give biosphere reserves their specificity. Criteria for an area to qualify for designation as a biosphere reserve include:

- To be of significance for biodiversity conservation;
- To provide an opportunity to explore and demonstrate approaches to sustainable development at a regional scale;
- To include, through an appropriate zoning:
  - a legally constituted core area (or areas) devoted to long-term protection, according to the conservation objectives of the biosphere reserve and of sufficient size to meet these objectives;
  - a buffer zone (or zones) clearly identified and surrounding or contiguous to the core area or areas, where only activities compatible with the conservation objectives can take place;
  - an outer transition area where sustainable resource management practices are promoted and developed.

In addition, the area concerned should be managed as a whole, using a single management plan, policy and implementation authority. A key condition is the close cooperation of local population in the management of the area. It should also be noted that only a part of the area concerned has to be protected, and that most biosphere reserves are composed of zones with different legal statuses.

Respect of such criteria is monitored by an Advisory Committee of independent experts which advises the International Council of MAB on the acceptation, or not, of a proposed biosphere reserve into the World Network.

Furthermore, the Framework also provides for an original system of periodic review, which takes place every ten years. This review was first created to make sure that all biosphere reserves designated before Seville would fulfill their criteria, and that their status would be revised if this was not the case. Recommendations made to the state concerned following the review have in general been followed through, and there are many cases in which the functioning of the biosphere reserve notably improved after undergoing a periodic review. In some cases, a complete revision and extension of the site was undertaken, as was the case for the Fakarava reserve in French Polynesia, for the Camargue area in the South of France, or the Archipelago Sea Area in Finland. In cases where the “Seville Criteria” was considered inapplicable by the state concerned, the reserve was removed from the World Network. To date, 65% of the BR sites have undergone a first periodic review.

The time has come for a second periodic review to be carried out for approved sites. The purpose of this second round of reviews is to transform reviews from a simple assessment of BRs’ respect of the Seville criteria, into an attempt at quantitatively evaluating the state of BRs, through the comparison of socio-economic and ecological date and the provision of conservation and development trends for the sites concerned. Indicators are currently being developed for this purpose.

Guidelines to establish transboundary biosphere reserves (TBR) have also been developed, in the form of Recommendations adopted by a Conference held in Pamplona, Spain, in October 2000. Conditions such as an effective cooperation between the two or three states concerned on the management of the site (a formal agreement, a joint zoning map, a joint work plan, a coordinating structure, etc.) have to be met for a TBR to be accepted by the MAB Council. The World Network currently counts nine TBRs.

Finally, the state of conservation of biosphere reserves is also monitored as part of the World Network, in order to identify potential threats to the sites. In such cases, the Secretariat will check the information with the state concerned and submit the issue to the International Council of MAB. Such cases mostly concern the core area of a site, for which conservation must be ensured.

In conclusion, biosphere reserves constitute an original concept, aiming at reconciling biodiversity conservation and use, bringing new perspectives to nature conservation. Based on national and local initiatives, BRs form an active network, which promotes innovative thinking and creativity in the area of biodiversity conservation, and

contributes to the adaptation and evolution of this instrument. The “new generation” BRs are indeed emerging as tools for land use planning. This evolution is particularly visible in certain regions, such as the European region, where many landscapes are designated as biosphere reserves. The inclusion of landscapes into the World Network, however, could still be improved in other regions, and in particular in Africa. Furthermore, biosphere reserves are developing to become learning platforms on which to test out new approaches to sustainable development and climate change adaptation.

1.2. CONVENTIONS ON SPECIES

The two conventions dealing with species have very different approaches. The Convention on International Trade in Endangered Species of Wild Fauna and Flora **(**CITES) focuses on the threat on species of fauna and flora that can result from international trade. The interdiction of ivory trade to protect the African elephant is a well known example. The Convention on the Conservation of Migratory Species of Wild Animals (CMS) deals with the issue of migratory species. The conservation of such species calls for cooperation between the different range states. The challenge is to include as many range states as possible, knowing that such states vary according to species, and to develop agreements for specific migratory routes. Measures have to include the protection of the habitats of the concerned species. Cooperation with Ramsar or with the Wetlands international NGO is therefore of crucial importance.

1.2.1 Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

CITES seeks to ensure that the international trade of specimens of wild animals and plants does not threaten their survival. Trade of live animals and plants and of a vast array of products derived from them, including food products, exotic leather goods, wooden musical instruments, timber, tourist curios and medicines, is the object of accrued attention.

This effort to safeguard certain species from over-exploitation requires international cooperation. CITES was therefore elaborated with this prerequisite in mind. The Convention grants varying degrees of protection to more than 30,000 species of animals and plants, whether or not they are traded as live specimens.

CITES was drafted as a result of a resolution adopted in 1963 at a meeting of members of IUCN. The text was finally agreed upon on March the 3rd, 1973, at a meeting of representatives of 80 countries in Washington D.C., and it entered into force in 1975. The Secretariat of CITES is managed by UNEP and located in Geneva.

CITES subjects international trade in specimens of selected species to certain controls. All imports, exports, re-exports and introduction from the sea of species covered by the Convention have to be authorised through a licensing system. Each of the 175 Parties to CITES have to adapt or modify their domestic legislation in order to ensure that these objectives are achieved at the national level. A crucial provision to the success of the implementation of the Convention is that each Party is required to designate one or more Management Authorities in charge of managing the licensing system, and one or more Scientific Authorities to advise the Management Authorities on the effects of trade on the status of the species. The obligation for national legislations to conform to CITES provisions is unequally respected, but IUCN has produced guidelines to help member states to do so.

The species covered by CITES are listed in three Appendices depending on the degree of protection required:

- Appendix I includes species threatened with extinction. Trade in specimens of these species is permitted only in exceptional circumstances.
- Appendix II includes species not necessarily threatened with extinction, but in which trade must be controlled in order to avoid incompatible use with their survival.

The Conference of the Parties (COP) has agreed on a set of biological and trade criteria to help determine whether a species should be included in Appendices I or II. At each meeting of the COP, every two or three years, parties submit amendment proposals based on such criteria. The Secretariat has an obligation to make a recommendation on each proposal presented by a member state. These proposals are then discussed and submitted to a two-thirds vote.

- Appendix III contains species that are protected in at least one country, which has asked other CITES Parties for assistance in controlling trade. Changes to Appendix III follow a distinct procedure from Appendices I and II, as each Party is entitled to make unilateral amendments to it. The Secretariat must only check whether the necessary legislation is in place in the country proposing an addition to Appendix III.

The manner in which CITES functions largely accounts for its effectiveness. First, the validity of export permits issued by state parties is controlled by the Secretariat. In the

event that an export permit is considered non valid, the Secretariat will request the importing state to refuse the importation of the specimen. In other words, a state can participate in the implementation of the convention by refusing to cooperate with another state. This double control modality, which is specific to CITES, is used very often and greatly reinforces the power of the convention. Furthermore, in the case where a member state, after an enquiry by the Secretariat, does not respect the provisions of the convention, the Standing Committee can recommend that trade with the concerned state be frozen. This situation has not often occurred, as the threat of a suspension generally suffices to solve the issue at hand. Data collected by CITES can lead to a reduction of trade through quotas, or even to a complete cessation when it appears that the trade of a species is excessive or threatening. The convention has a good geographic coverage and successfully regulates trade between several countries as long as one of them is party to CITES. It also benefits from sound scientific expertise.

Another key factor for the success of CITES is the establishment of a close cooperative relationship with the World Customs Organization (WCO) and INTERPOL. The role of the WCO in controlling specimens on various borders is crucial, and cooperation between the WCO and CITES has proved particularly effective, thanks in particular to the training of customs officer to biodiversity protection issues. Success stories include the safeguard of the vicuna, the South American caiman or the Nile crocodile, and failures are, for example, the inability to regulate or stop the killing of tigers and rhinoceros for trade purposes.

A register of violations is kept by the Secretariat and a report is transmitted to state parties. Both communications are made public, which gives them an effective sanctioning power, based on moral grounds. It should be remembered, however, that the difficulties in implementing the CITES restrictions are largely linked to the important economic interests involved in the trade of certain species, and the robustness of illegal activities such as poaching, which cannot be dismantled by the CITES alone, or in cooperation with the WCO and INTERPOL.

1.2.2 Convention on the Conservation of Migratory Species of Wild Animals. (CMS)

The adoption of this convention in Bonn (Germany) on the 23rd of June 1979 followed a recommendation made during the 1972 Stockholm Conference, which urged governments to consider “the need to enact international conventions and treaties to protect species inhabiting international waters or those which migrate from one country to another.”

The Secretariat of the Convention is managed by UNEP and is hosted in Bonn, Germany. Its COP, which counts 114 Parties to date, meets every three years.

The Convention recognises that migratory species[13] should be considered as shared resources, for which range states should exercise joint responsibility. With this consideration in mind, the Convention provides a framework within which Parties take appropriate action, individually or in cooperation, to conserve migratory species and their habitats by:

- adopting strict protection measures for endangered migratory species (Appendix I);
- concluding multilateral Agreements for the conservation and management of migratory species that have an unfavourable conservation status or would benefit significantly from international cooperation (Appendix II); and
- undertaking joint research activities.

This framework also covers marine species which migrate between adjacent Exclusive Economic Zones or between areas under coastal state jurisdiction and the high seas.

Parties must prohibit any “taking” of such species, which includes hunting, fishing, capturing, harassing, and deliberate killing. Limited exceptions are possible in specific cases (e.g. for scientific purposes or to satisfy the needs of traditional subsistence hunting), but these must be specific as to what they cover, limited in space and time, and must not operate to the disadvantage of the species concerned.

Parties must also “endeavour” to conserve and, where feasible, restore the important habitats of these species; to prevent, remove, compensate for or minimise the adverse effects of activities or obstacles that seriously impede or prevent migration; and to prevent, reduce or control factors that endanger or are likely to endanger these species. This includes strictly controlling the introduction of exotic species and controlling, limiting or eliminating species which have already been introduced (Article III.4).

The only requirement of Appendix II is a non-binding provision for Parties to “endeavour” to conclude international agreements. Such agreements are intended to benefit migratory species listed in Appendix II, and especially those with an

[13] Defined as: “the entire population or any geographically separate part of the population of any species or lower taxon of wild animals, a significant proportion of whose members cyclically and predictably cross one or more national jurisdictional boundaries.” (aricle 1 of the Convention)

unfavourable conservation status, over their whole range of migration. The object of these agreements must be to restore the migratory species concerned to a "favourable conservation status" (as defined at Article I.1.c). They are open to accession by all range states of the species concerned, including those that are not Parties to CMS, and take the form of treaties, as they provide for the creation of institutions and contain financial provisions. Taking the form of treaties, they must therefore be ratified (with the delays inherent to national procedures). This also means that they are independent from the convention, with a separate secretariat and their own governing body (COP), and have only to report back to the COP of the CMS.

The relative independence of the agreements vis-à-vis the CMS is a condition for their flexibility and efficiency. In particular, this independence enables states, which are not necessarily parties to CMS but are range states to one or a number of species, to join a specific agreement. This particular status also has the effect of complicating the functioning of the whole system of protection of migratory species.

There are currently seven Agreements under CMS. These concern albatrosses and petrels, cetaceans in the Black Sea and Mediterranean and small cetaceans, African-European waterbirds, European bats, gorillas and Wadden Sea seals. The main Agreement is the African-Eurasian Waterbird Agreement (AEWA), which was concluded in 1995 and entered into force in 1999. This agreement covers 255 species of birds which migrate in 118 range states, among which 63 are parties to AEWA. Efforts are being made to improve this number and special attention is being given to various African range states, with an "African Initiative" launched in 2009. Wetlands International provides a technical support to AEWA by monitoring populations of birds and publishing a conservation status review every three years, which describes many cases in which decline was halted.

Memoranda of Understanding (MOU) may also be concluded under Article IV.4 of the Convention. Eighteen MOUs have been concluded so far. These MOUs concern the conservation of various species of birds, turtles, cetaceans, elephants, antelopes, and marine mammals. Unlike Agreements, MOUs are not legally binding, but nevertheless constitute official undertakings signed by authorised government representatives generally originating from the wildlife departments of the states concerned. Such Memoranda usually include specific conservation actions to be implemented by each state involved, in an annexed Action Plan. They provide a relatively simple way of establishing a limited framework for regional cooperation for the conservation of certain migratory species, possibly as an intermediary step to the conclusion of a binding Agreement. The main weakness of MOUs however, is their lack of budget, and the absence of a Secretariat and governing body. Some of them can be

"sponsored'' as part of a GEF project (e.g. Siberian Crane), or by a state, for a variable period of time. This same state can also host a light Secretariat.

The distribution of Parties by region is still uneven under the CMS. Indeed, Parties are concentrated in Europe (more particularly in the European Community) and in Africa, with coverage being weaker in Asia and the Americas. Countries of major importance for migratory birds such as the Russian Federation, where the great majority of Eurasian waterfowl nest, the United States, Canada, most Latin American countries, China and Japan, are still not Parties.

As long as major range states remain outside the CMS, the inclusion of endangered migratory species in Appendix I will unfortunately remain largely symbolic. Although this lack of coverage has also long hampered the negotiation of Agreements for Appendix II species, the situation has improved, with seven Agreements now having been adopted and several others currently in negotiation. Efforts should be pursued by the Secretariat to convince range states to join the Convention, as a way of improving its efficiency.

National reports on general policy and measures taken for species in Appendix I are required by the Convention, but the rate of reporting is low. As mentioned earlier, each agreement has its own reporting system, but reports back to CMS.

2. A NEW GENERATION OF AGREEMENTS

2.1 CONVENTION ON BIOLOGICAL DIVERSITY (CBD), 1992

Because of its holistic approach and its innovative way of addressing biodiversity challenges, far from the conservation of selected species or habitats approach, the CBD can be perceived as a revolutionary instrument. At its inception in 1984, it was conceived as a global tool, which would establish general obligations for the preservation of biodiversity and provide a coherent framework for action. The IUCN started to elaborate principles for a draft along these lines, when in 1987, UNEP was instructed by its Governing Council to "investigate the desirability and possible form of an umbrella convention to rationalize current activities in this field". For developed countries, the main challenge lay in filling the gaps that existed between the existing biodiversity conventions, and to better coordinate actions between them.

When the negotiations started, it very soon became apparent that the views of developed and developing countries were divergent. As one delegate put it quite clearly in corridor discussions, the latter did not want another convention on conservation, and would fight for the recognition of their rights to access and use elements of biodiversity under their jurisdiction, as well as to an equitable share of benefits resulting from their use. One item which was subject to much debate and which illustrated this divergence of views was the issue of a global list of areas of importance to biodiversity. Developed countries and in particular the European countries, were very strongly in favour of elaborating such a list, based on the lists comprised in pre-existing conventions. Developing countries led by India rejected this idea, and insisted instead on increasing the financial support and technology transfer from developed countries, and on the need to recognise the rights of indigenous people.

The negotiations were cumbersome and lasted for more than three years. As Dr. Mostafa Tolba, Executive Director of UNEP, declared at the time, "this is the most difficult task I have undertaken in my life." The convention was eventually ready for signature by the 1992 Rio Conference on Environment and Development, and signed by 158 countries. It has now been ratified by 193 countries.

With this convention, biodiversity was for the first time dealt with through a holistic approach. The text is built on the three equal pillars of conservation, sustainable use and benefit-sharing. New principles resulting from compromises obtained during negotiations were established. For instance, the conservation of biological diversity was retained as “a common concern” (rather than a common “heritage”, which has more implications in terms of responsibility), and the sovereignty of states on their own biological resources was enshrined. The CBD introduced new notions and issues in the field of conservation, such as the idea of intellectual property rights and the collective rights of indigenous people. The sustainable use of elements of biodiversity is presented as being as important as conservation itself, and issues such as biotechnology, ownership of genetic resources, transfer of technologies, traditional knowledge and western science, were at the core of the negotiations.

However, the obligations comprised in the convention are loose, and it remains a very general instrument that provides for principles rather than specific measures or roadmaps. Moreover, states have very few obligations, apart from general commitments, to monitor, conserve, and use biodiversity in a sustainable way, or to elaborate national strategies and action plans to this end.

To palliate this lack of binding provisions, the CBD has endeavoured to elaborate at each of its COP, thematic work programmes in specific domains such as marine and coastal biodiversity; agricultural biodiversity; forest biodiversity; island biodiversity; the biodiversity of inland waters; dry and sub-humid lands; and protected areas and mountain biodiversity. The next COP, which will close the 2010 International Year of Biodiversity, will be meeting in Nagoya, Japan, from the 18th to the 29th of October 2010. It is expected that a new strategic plan to implement the CBD will be adopted there, comprising objectives such as: addressing the causes of biodiversity-loss, reducing direct pressure on biodiversity, improving the safeguarding of biodiversity, enhancing the benefits from ecosystem services and developing capacity-building. Such objectives will have to be met by 2020.[14]

The Secretariat of the convention is managed by UNEP and located in Montreal, Canada. Its COP meets every two years. A Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA) provides technical support to the work of the convention. Composed of experts designated by their governments, the SBSTTA has however become a second negotiation forum for substantial issues related to the implementation of the convention. The SBSTTA meets at least once every two years, and sometimes more often.

[14] Since writing this article, the strategic plan was adopted at the COP in Nagoya of November 2010.

Funding is provided by the Global Environment Facility (GEF). Conventions-related activities in developing countries are eligible for support from the GEF and, as of 2009, almost one billion US$ had been spent for biodiversity projects in 120 countries.

The CBD is considered as a framework for action, calling for the adoption of specific protocols to elaborate on the general provisions of its articles. However, since the adoption of the convention, only one protocol has been agreed upon: the Cartagena Protocol on Biosafety, which entered into force on September 11th, 2003, and counts more than 150 countries as Parties. The protocol seeks to protect biological diversity from the potential risks posed by living modified organisms. Efforts to develop new protocols, in particular on access and benefit sharing are ongoing, but face many difficulties relative to property rights, traditional knowledge and prior informed consent. The CBD has elaborated guidelines on the issue, known as the Bonn Guidelines, which are used as a basis for negotiations.[15]

The rate of national reports (Article 26) provided by state parties is high, and most parties have elaborated national biodiversity strategies, as requested by the convention. Data collected, including data relating to obstacles to the implementation of CBD, are used by the Secretariat to produce the Global Biodiversity Outlook, intended to serve as a reference for the assessment of the status and trends of biodiversity, and the drivers of biodiversity loss. National strategies are an important achievement of the CBD. Although unequal in quality, they represent an attempt to promote a consistent policy for the conservation and use of biodiversity in each country. They are expected, and often do, to include the measures taken under other instruments in order to implement obligations, thus fulfilling the integrative role of the CBD.

Among the positive achievements of the convention, the work on thematic issues and the adoption of guidelines should be highlighted. These guidelines are negotiated between the parties. Although these guidelines are not binding, national focal points designated under the convention are expected to ensure that they are taken into account in national policies. In some areas, and despite long discussions, it has not been possible to produce consensual guidelines. Australia for example, opposed the elaboration of guidelines on invasive species. Another achievement of the convention

[15] Since this paper was written, the protocol on access and benefit sharing was adopted at the COP in Nagoya, on the 2nd of November 2010. This is a major step in the work of the convention and the realisation of its third objective. The protocol establishes provisions for regulating access to genetic resources of actual or potential value to industry, health and other sectors, on the basis of consensual terms between the concerned parties. Once the protocol enters into force, the challenge will be to find ways for its practical implementation in all relevant contexts and at different levels.

is the constitution of a roster of experts. However, it must be underlined that the selection process remains cumbersome, as experts are designated by state parties, a process which puts into question their independence.

On the negative side, the convention is generally perceived as being a very cumbersome and bureaucratic mechanism, its COPs spending much time and energy discussing processes and procedures. The SBSTTA has become increasingly politicised to the detriment of scientific and technical expertise, giving legitimacy to those in favour of the creation of an Intergovernmental Platform on Biological Diversity and Ecosystem Services (IPBES) (see below).

2.2. INTERNATIONAL TREATY ON PLANT GENETIC RESOURCES FOR FOOD AND AGRICULTURE

The Treaty on Plant Genetic Resources for Food and Agriculture is an application of the CBD in the specific field of Plant Genetic Resources for Food and Agriculture, defined as "any genetic material of plant origin of actual or potential value for food and agriculture".

The treaty's objectives are the conservation and sustainable use of plant genetic resources for food and agriculture, and the fair and equitable sharing of benefits derived from their use. Through this treaty, countries agree to establish a Multilateral System to facilitate access to plant genetic resources for food and agriculture, and to share the benefits in a fair and equitable manner. The Multilateral System applies to over 64 major crops and forages.

Member states can access resources from the Multilateral System for research, breeding and training purposes. When a commercial product is developed using these resources, the Treaty provides for the payment of an equitable share of the resulting monetary benefits, if this product may not be used without restriction by others for further research and breeding. The Treaty also recognises the contribution that farmers and their communities have made and continue to make to the conservation and development of plant genetic resources. This is the basis for the definition of “Farmers' Rights”, which include the protection of traditional knowledge and the right to participate equitably in benefit-sharing and national decision-making on plant genetic resources. Governments are responsible for the implementation and respect of these rights.

The Treaty came into force on June 29th, 2004. The Secretariat is managed by the FAO and located in Roma. The 125 governments that ratified the Treaty make up its

Governing Body. The Treaty was easier to negotiate than a general protocol on access and benefit sharing, because it was limited to a specific field and was based on a robust body of work carried out over many years by FAO.

The Treaty's most important innovation is its proposal for instituting an equitable access to biodiversity resources and benefit-sharing system, in which 64 of our most important crops – crops that together account for 80 percent of all human consumption – will comprise a pool of genetic resources that are accessible to everyone. On ratifying the Treaty, countries thus agree to make genetic material and related information about the crops stored in their gene banks, available to all. This gives scientific institutions and private sector plant breeders the opportunity to work with, and to potentially improve, the material stored in gene banks or crops already growing in fields. By facilitating research, innovation and by lifting restrictions on the exchange of information, costly and time-consuming contractual negotiations with individual gene banks can be greatly reduced. Furthermore, a benefit-sharing fund has been established to support projects and assist farmers. This fund will invest more than US$ 10 million for the years 2010/2011.

2.3. COOPERATION AMONG CONVENTIONS AND PROGRAMMES

As indicated above, the CBD is not, and cannot be an umbrella convention, nor can it have a coordinating role for other conventions, with each convention standing on its own. Nevertheless, since the entry into force of the CBD, efforts have been developed to better coordinate the six biodiversity-related multilateral agreements, namely CITES, CMS, Ramsar, World Heritage, and the FAO International Treaty on Plant Genetic Resources. The Secretariats of the conventions meet regularly under the sponsorship of UNEP, and have developed MOUs among themselves for joint activities.

Such activities include:

Joint field missions in the case of threats to sites listed under WH, Ramsar and/or biosphere reserves. Such initiatives put more pressure on the Authorities concerned, and the psychological impact of demonstrating joint action is not negligible.

- Joint production of material (eg: joint CMS-Ramsar training kits).
- Joint field projects (for instance a project on the safeguard of the Saïga antelope developed by CITES and CMS in Central Asia or of the gorilla by WHC, CMS and CITES in DRC).

- The clearing house mechanism developed by CBD, which provides access to information such as case studies of other conventions, and facilitates scientific and technical cooperation.
- Harmonisation of methodology for taxonomy and joint data bases developed by UNEP/WCMC.
- Conventions are also working on the difficult question of the harmonisation of national reports and reporting methodologies.

3. COMPLETING THE NORMATIVE INSTRUMENTS BY A NEW INTERNATIONAL TOOL: STRENGTHENING THE SCIENCE-POLICY INTERFACE

The Millennium Ecosystem Assessment (MEA)[16] concluded that the provision of ecosystem services and the status of biodiversity would be in danger of further degradation if no appropriate action was taken. This international exercise, which involved more than 1,000 experts, was a major step towards improving biodiversity conservation because it attempted to categorise services provided by ecosystems and to define major forces affecting biodiversity. The MEA also explicitly stated that scientific knowledge had to be translated into decision-making, and that some issues still needed scientific work, such as bio-fuels or the need to elaborate indicators to evaluate the progress made in meeting the 2010 targets.

The need for a more robust scientific assessment of the status of biodiversity and better informed decision-makers led to the idea, promoted by many countries and France in particular, of creating a new mechanism to respond to these needs. At a Conference on "Biodiversity, Science and Governance" held at UNESCO, Paris, in 2005, President Chirac stated,

> *that the work of the Intergovernmental Panel on Climate Change has brought about a scientific consensus on the reality and significance of global warning (…) We need a similar type of mechanism for biodiversity.*

The idea of creating a mechanism modeled on the IPCC was debated in many forums and led to the creation of an *ad hoc* intergovernmental body. At the IPCC's third meeting, which took place in Busan, Republic of Korea, from the 7th to the 11th of June 2010, participants agreed on the establishment of an Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services "to strengthen the science policy interface." The final decision should be taken by the United Nations General Assembly at its fall session in 2010.

[16] The Millennium Ecosystem Assessment looked at the consequences of ecosystem change for human well-being. From 2001 to 2005, the MA involved the work of more than 1,360 experts worldwide.

The IPBES is conceived as a scientifically independent body, providing knowledge assessments and facilitating capacity building. It is expected that the new body will "bridge scientific knowledge" documenting the accelerating decline and degradation of the natural world with governmental action, required to reverse these damaging trends. The IPBES is also expected to considerably improve public awareness on the issue of biodiversity.

Sponsoring organisations include UNEP, UNESCO and FAO. The location of its Secretariat will be decided at its first meeting in 2011.

CONCLUSION

Each convention provides positive results, which must be understood with regards to their circumscribed scope of action. In this sense, conventions do not overlap but rather complement each other. The CBD has to further develop its capacity, particularly with regards to the preparation and adoption of protocols, which is not an easy task. The erosion of biodiversity has many causes and necessitates measures not only directly targeted to the protection of species and ecosystems, but also general policy measures, for instance in the field of pollution control and reduction, which fall under the responsibility of other conventions and fora. Establishing closer links with such issues, which also comprise climate change and trade, would improve the effectiveness of policies and strategies to protect biodiversity.

Cooperation among conventions must still be improved: it should aim at defining common priority areas, circumscribing the role of each convention, and work to establish a system of common knowledge management that would include the development of common databases. The setting up of an "International Steering Committee", composed of representatives of each convention, has already been recommended.[17] Another regularly discussed issue is that of the need for a common location for all the Secretariats, as is the case for the Chemical and Wastes conventions whose Secretariats are all located in Geneva. Secretariats of the biodiversity-related conventions are currently located in Canada, France, Switzerland and Germany, and managed by various organisations (UNEP, IUCN and UNESCO).

However, coordination should first and foremost be improved at the national level, with synergy starting at home. This is a *sine qua non* condition for a better implementation of the conventions, in particular where some overlap between conventions is inevitable, as is the case for the listing of sites under several instruments or policies. "At-home" coordination is also essential to ensure an effective reporting process. Nevertheless, the most urgent step to take is to ensure that the measures undertaken under each biodiversity-related convention are systematically integrated into the national strategies elaborated under the CBD. At present,

[17] C. de Klemm, "Voyages à l'intérieur des Conventions internationales de protection de la Nature" in M. Prieur, C. Lambrechts (eds.), *Les Hommes et l'environnement, mélanges en hommage à Alexandre Kiss*, Paris, Frison-Roche, 1998, pp 611-652.

bureaucratic inertia and the compartmentalisation of national focal points are put forward as factors weakening coordination at the national level.

It has been argued that the biodiversity-related conventions should become protocols to the CBD.[18] The main advantage of this disposition would be that activities under the biodiversity-related conventions would systematically be eligible for GEF funding, thus improving their financial situation. The difficulty of enacting such a structural change should not be underestimated, however, as such conventions are managed by different organisations. Furthermore, transforming the biodiversity-related conventions into protocols would only address the conservation dimensions of the CBD, leaving aside central issues such as access and benefits, property rights and respect of traditional knowledge.

It is widely recognised that the main weakness of international environmental law is the lack of general non-compliance procedures. Each convention has therefore to find mechanisms to control, in the best way possible, the implementation of its provisions. In this respect, monitoring and reporting are crucial tools to ensure the effective implementation of the different conventions: they are a way of constantly reminding states of their obligations under international environmental law. Reporting in particular could be improved, if the breaching of rules by “bad students” were systematically publicised by the COP. National authorities should also strive to change the perception of national reporting obligations within their own bureaucracies, to establish a conception of national reporting as a key element to identify problems, difficulties and dysfunctions within national bureaucracies, and to propose effective and influential solutions. Improved reporting could also help develop and gather data on the evolution of the state of biodiversity.

The core issue of enforcement remains largely under the responsibility of sovereign states, and suffers from the absence of political leadership, in this arena, accountable in a large part to the desire to preserve economic interests. In this respect, arguments in favour of protecting biodiversity could be developed with a view of demonstrating the economic value of biodiversity and ecosystems on the basis of robust data and long-term trends.

Putting biodiversity higher up on the political agenda requires better informed decision-makers, and a sensibilised population. In this respect, it can be expected that the newly established IPBES will fulfil the role of a public advocate for biodiversity protection, just as the IPCC did for climate change. Despite the disappointing results

[18] A. Johannsdottir, I. Creewell, and P. Bridgewater, "The current framework for international governance of biodiversity – is it doing more harm than good?," *RECIEL,* vol. 19, n° 2, 2010, pp. 139-149.

of the Copenhagen Conference, which showed the limits of such a role, it is expected that IPBES will open new scientifically-based perspectives for new policies, and help to mobilise the international community in favour of biodiversity protection.

INTERVIEWEES

Salvatore Arico, focal point for biodiversity, UNESCO

Peter Bridgewater, former Secretary-General of the Ramsar Convention (2003/2007)

Wolfgang and Françoise Burhenne, Environnemental Law Centre, IUCN, Bonn

Malcolm Hadley, former staff of the MAB Secretariat, UNESCO

Jean Patrick Leduc, Museum d'histoire naturelle, former staff of the CITES Secretariat

Bert Lenten, Executive Secretary of AEWA

Kishore Rao, Deputy Director of the World Heritage Centre, UNESCO

Melanie Virtue, UNEP/CMS Secretariat

BIBLIOGRAPHY

M. Batisse, “The Biosphere Reserve: a Tool for Environmental Conservation and Management,” *Environmental Conservation*, vol. 9, n° 2, 1982, pp. 101-111.

M. Batisse, “Developing and Focusing the Biosphere Reserve Concept,” *Nature and Resources*, vol. 22, n° 3, 1982, pp. 2-11.

M. Batisse and G. Bolla, *The Invention of World Heritage,* History Club, Association of former UNESCO Staff members, Paris, France, 2005.

F. Burhenne-Guilmin, and J. Scanlon, “International Environnemental Governance, An International Regime for Protected Areas,” *Environmental Policy and Law Paper* n° 49, 2004.

F. Burhenne-Guilmin, *Hotspots in Biodiversity Law, Environmental Policy and Law*, ICEL, Bonn, vol. 39, n° 1, 2009, pp 40-44.

F. Burhenne-Guilmin, “La diversité biologique dans les traits”, in *International Colloquy in tribute of Cyrille de Klemm, Proceedings. Environmental encounters*, Council of Europe, n° 48. pp. 17-25.

M. Jardin, “La diversité biologique et la Convention de l’UNESCO concernant la protection du patrimoine mondial, culturel et naturel in International,“ *Colloquy in Tribute of Cyrille de Klemm, proceedings. Environmental Encounters*, Council of Europe, n° 48, 2000, pp. 41-48.

M. Jardin, “Les réserves de biosphère se dotent d’un statut international: enjeux et perspectives,” *Revue juridique de l’environnement,* CNRS, Paris, n° 4, 1996, pp. 375-385.

A. Johannsdottir, I. Creewell, and P. Bridgewater, “The current framework for international governance of biodiversity – is it doing more harm than good?”, *RECIEL*, vol. 19, n° 2, pp. 139-149.

C. Juma, and V. Sanchez, *Biodiplomacy: Genetic Resources and International Relations,* ACTS Press, African Centre for technology Studies, Nairobi, n° 4, 1994.

C. de Klemm, “Biological Diversity Conservation and the Law,” *Environmental Policy and Law Paper*, IUCN, Gland, Switzerland, n° 29, 1993.

C. de Klemm, “Voyages à l’intérieur des Conventions internationales de protection de la Nature,” in M. Prieur, C. Lambrechts (eds.), *Les Hommes et l’environnement, mélanges en hommage à Alexandre Kiss*, Paris, Frison-Roche, 1998, pp. 611-652.

C. de Klemm, and C. Shine, “Wetlands, Water and the Law,” *IUCN Environmental Policy and Law Paper*, IUCN, Gland, Switzerland, n° 38.

V. Koester, *The Five Biodiversity-Related Conventions*, Environmental Policy and Law, ICEL, Bonn, vol. 31, n° 3, 2001, pp.151-156.

Sixty Years of Science at UNESCO, UNESCO Publishing, Paris, France, 2006.

GLOBAL BIODIVERSITY TARGETS: VAIN WISHES OR SIGNIFICANT OPPORTUNITIES FOR BIODIVERSITY GOVERNANCE?

Raphaël Billé,[1] Jean-Patrick Le Duc,[2] Laurent Mermet[3]

INTRODUCTION

The objective of "achieving by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level" has raised ample enthusiasm. Considered by Balmford, Crane *et al.* to be "an unprecedented opportunity for conservation" and "the most significant conservation agreement of the decade,"[4] or by Mace and Baillie to be "a visionary and courageous step (…), one of the more significant events in policies for environmental management and biodiversity conservation,"[5] the "2010 biodiversity target" has been the subject of much attention in the conservation community. An indication of this craze, the "Countdown 2010" was launched in 2004 in order to mobilize action and ensure that all governments and members of civil society at every level would take the necessary actions to reach the

[1] Corresponding author. Institute for Sustainable Development and International Relations (IDDRI), Sciences Po, 27 rue Saint Guillaume, 75337 Paris, France; raphael.bille@iddri.org.
[2] Museum National d'Histoire Naturelle, Paris, France.
[3] AgroParisTech-ENGREF, Paris, France.
[4] A. Balmford, P. Crane, A. Dobson, R.E. Green, G.M. Mace, "The 2010 challenge: data availability, information needs and extraterrestrial insights", *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 221-228.
[5] G.M. Mace, and J.E.M. Baillie, "The 2010 biodiversity indicators: Challenges for science and policy," *Conservation Biology*, vol. 21, n° 6, pp.1406-1413.

2010 objective. Hosted by IUCN, it currently gathers over 1,000 partners. Undoubtedly however, the 2010 target has also faced significant scepticism as expressed by Fisher: "Were there any conservationists who had a realistic expectation, even in 2002, that the CBD's target could be achieved in some way?"[6] Scepticism at times gave way to a sterner irony with regard to their very usefulness, when as early as 2006, it became clear that the 2010 target would not be met.[7]

It is not unusual for international environmental endeavours to be caught between somewhat naïve enthusiasm and abrupt disenchantment. What is more specific to the 2010 biodiversity target, however, is that it has generated surprisingly little in-depth, critical, action-oriented debate. Dedicated scientific literature has focused essentially on the need for better indicators to monitor success or failure in the achievement of the objectives.[8] On the contrary, little thinking seems to have been put into crucial questions such as: How useful are these kinds of targets for global biodiversity governance? What room for manoeuvre do they unlock, i.e., whose action do they make possible, and which positions do they make undefendable? Under which conditions? How binding are they? Who do they actually commit? Who is responsible and accountable for success or failure? What lessons can be learnt from similar experiences in other policy areas? In other words, in the specific field of global biodiversity governance, does the objective setting method work? Despite the call by

---

[6] M. Fisher, "2010 and all that – Looking forward to biodiversity conservation in 2011 and beyond", *Oryx*, vol. 43, n° 4, 2009, pp. 449–450.

[7] Secretariat of the CBD, *Global Biodiversity Outlook 2*, Montreal, Canada, 2006.

[8] See for example: A. Balmford, L. Bennun, B. ten Brink, D. Cooper, I.M. Côté, P. Crane, A. Dobson, N. Dudley, I. Dutton, R.E. Green, R.D. Gregory, J. Harrison, E.T. Kennedy, C. Kremen, N. Leader-Williams, T.E. Lovejoy, G. Mace, R. May, P. Mayaux, P. Morling, J. Phillips, K. Redford, T.H. Ricketts, J.P. Rodríguez, M. Sanjayan, P.J. Schei, A.S. van Jaarsveld, B.A. Walther, "The Convention on Biological Diversity's 2010 target", *Science*, Policy Forum, vol. 307, 2005, pp. 212-213; A. Balmford, P. Crane *et al*, *op. cit*.; M. de Heer, V. Kapos, and B.J.E ten Brink, "Biodiversity trends in Europe: development and testing of a species trend indicator for evaluating progress towards the 2010 target", *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 297–308; A. Dobson, "Monitoring global rates of biodiversity change: challenges that arise in meeting the Convention on Biological Diversity (CBD) 2010 goals", *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 229–241; G.M. Mace, and J.E.M. Baillie, *op. cit*.; M. Walpole, R.E.A. Almond, C. Besançon, S.H.M Butchart, D. Campbell-Lendrum, G.M. Carr, B. Collen, L. Collette, N.C. Davidson, E. Dulloo, A.M. Fazel, J.N. Galloway, M. Gill, T. Goverse, M. Hockings, D.J. Leaman, D.H.W. Morgan, C. Revenga, C.J. Rickwood, F. Schutyser, S. Simons, A.J. Stattersfield, T.D. Tyrrell, J.-C. Vié, and M. Zimsky, "Tracking Progress Toward the 2010 Biodiversity Target and Beyond", *Science*, vol. 325, 2009, pp. 1503-1504; M. Walpole, and P. Herkenrath, "Measuring progress towards the 2010 target and beyond: an international expert workshop on biodiversity indicators", *Oryx*, vol. 43, n° 4, 2009; S.H.M. Butchart, A.J. Stattersfield, J. Baillie, L.A. Bennun, S.N. Stuart, H.R. Akçakaya, C. Hilton-Taylor, and G.M. Mace, "Using Red List Indices to measure progress towards the 2010 target and beyond," *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 255-268.

Sutherland *et al*.[9] to address the issue of the 2010 targets' impact as one of the "one hundred questions of importance to the conservation of global biological diversity,"[10] it has remained vastly unexplored.

As the celebration of biodiversity culminated in 2010, though it had become official that the international community would not reach the global objective of significantly reducing the loss of biodiversity, Parties to the Convention on Biological Diversity (CBD) agreed to set new global targets for 2020 and beyond. They did so without, in our opinion, carefully addressing the following essential questions. In order to contribute to this much needed debate, this paper builds on the diagnosis of a paradox and an ambiguity:

- A paradox: targets are being set, but no specific agency is accountable for implementation or responsible for delivering results. This is true both at the international and national level. In line with the intensive scientific work on indicators, only monitoring functions seem to be relatively well defined globally and nationally.
- An ambiguity: Global biodiversity targets are often understood by the same authors to be both commitments (e.g., "an important political commitment"[11]), and ways "to stimulate constructive actions."[12] To what extent is this synergetic or even compatible? Do we define targets to reach them, to generate action, or both?

With this in mind, we first draw a brief retrospective on objective setting for global biodiversity, from the origins of the 2010 experience to the recent renewal of the effort towards 2020 and beyond. We concentrate here mainly on the global experience to the purpose of focusing on global governance issues, disregarding the nonetheless

---

[9] W.J. Sutherland, W.M. Adams, R.B. Aronson, R. Aveling, T.M. Blackburn, S. Broad, G. Ceballos, I.M. Côté, R.M. Cowling, G.A.B. Da Fonseca, E. Dinerstein, P. J. Ferraro, E. Fleishman, C. Gascon, M. Hunter Jr., J. Hutton, P. Kareiva, A. Kuria, D.W. MacDonald, K. MacKinnon, F.J. Madgwick, M.B. Mascia, J. McNeely, E.J. Milner-Gulland, S. Moon, C.J. Morley, S. Nelson, D. Osborn, M. Pai, E.C.M. Parsons, L.S. Peck, H. Possingham, S.V. Prior, A.S. Pullin, M.R.W. Rands, J. Ranganathan, K.H. Redford, J.P. Rodriguez, F. Seymour, J. Sobel, N.S. Sodhi, A. Stott, K. Vance-Borland, and A. R. Watkinson, "One Hundred Questions of Importance to the Conservation of Global Biological Diversity", *Conservation Biology*, vol. 23, n° 3, 2009, pp. 557–567.

[10] Section on "Impacts of conservation interventions", question 86: "What have been the impacts on biodiversity of the Convention on Biological Diversity 2010 targets (…)?", *Ibid.*

[11] G.M. Mace, W. Cramer, S. Díaz, D.P. Faith, A. Larigauderie, P. Le Prestre, M. Palmer, C. Perrings, R.J. Scholes, M. Walpole, B.A. Walther, J.E.M. Watson, and H.A. Mooney, "Biodiversity targets after 2010", *Current Opinion in Environmental Sustainability*, n° 2, 2010, pp. 3-8.

[12] *Ibid*.

important European targets.[13] The second section provides an action-oriented analysis of global biodiversity targets, analysing associated expectations and hopes as well as the underlying rationale. This section then unveils important theories of management deeply entrenched within the objective setting method to shed light on the thorny issues of responsibility and accountability in the case of biodiversity. It concludes with the global biodiversity targets that have been achieved so far. Overall, it leads us to believe that global targets may not be very well suited to biodiversity governance, but that the approach is here to stay and can still be used as a stimuli for action. The main condition is for biodiversity targets to at least help make responsibilities clearer among stakeholders and policies. The third section aims at providing forward-looking thoughts on the 2020 targets, in light of the above, as we enter a new ten-year period of probable oscillations between enthusiasm and sarcasm. We show why and how some targets are of a very strategic nature, and may provide significant opportunities to the conservation community in the short to medium term, while others are more likely to remain vain wishes.

In order to try and make the best of lessons learnt from other governance areas, frequent references are made throughout this paper to better documented trials of global objective setting, often facing similar challenges and debates. The Millennium Development Goals (MDGs) are of particular interest in that regard, both because the 2010 biodiversity target was part of the MDGs[14] and because they have been the subject of much more critical debates, with Easterly for instance describing the MDGs as “the worst designed incentive scheme for public policy seen in my lifetime”![15]

[13] “Halting the loss of biodiversity by 2010”, and then “halting the loss of biodiversity and the degradation of ecosystem services in the EU by 2020, and restoring them in so far as feasible, while stepping up the EU contribution to averting global biodiversity loss”.

[14] Goal 7: “Ensure environment sustainability”, target 2: “Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss”, UN Millenium Development Goals, Target 7: *Ensure Environemental Sustainability*, <http://www.un.org/millenniumgoals/environ.shtml>, last accessed on the 30th of July 2010.

[15] W. Easterly, “It’s over: The tragedy of the Millennium Development Goals,” *The Huffington Post*, 6th of July 2009.

1. GLOBAL BIODIVERSITY TARGETS: A RETROSPECTIVE

1.1. THE ORIGINS OF OBJECTIVE SETTING FOR GLOBAL BIODIVERSITY

The idea of setting objectives for the environment at the global level is nothing new. The nineteenth century saw the emergence of awareness, especially among scientists, that some environmental problems were global by nature (some forms of pollution, deforestation, species extinction, etc.). Conservationists therefore soon started thinking globally, and setting objectives for the planet as a whole.[16] However, to the best of our knowledge these objectives remained quite general for a long time, i.e., qualitative and without timelines.

An important step was made in the 1970s with the multiplication of environmental time-bound objectives – usually qualitative or process-oriented and increasingly institutionalized outside conservation arenas. The Stockholm action plan in 1972 included several such time-bound objectives, with, for example, recommendation 59 of the action plan stating that

> *It is recommended that the Secretary-General take steps to ensure that a comprehensive study be promptly undertaken with the aim of submitting a first report, at the latest in 1975, on available energy sources, new technology, and consumption trends, in order to assist in providing a basis for the most effective development of the world's energy resources, with due regard to the environmental effects of energy production and use (...)*

Twenty years later, the Rio Agenda 21 was literally full of time-bound qualitative objectives regarding, for instance capacity, building needs or legal frameworks to be set up. One could rightfully argue that time-bound objectives appeared out of frustration and growing concerns towards – already – several decades of globally unfruitful environmental efforts. This suggestion is strengthened by the similar and parallel evolution in the development sector, in which the number of goals set seems

[16] P. Blandin, *Biodiversité. L'avenir du vivant*, Paris, Albin Michel, 2010.

to be proportionately aligned with growing disappointment.[17] It should be noted that environmental protection and development alike were already perceived by many as facing more failures than successes towards the end of the 1960s. In other words, it was already felt that something had to change, and that action had to be taken quickly and more efficiently – hence the global goals.

Global environmental governance finally entered an era of time-bound, quantitative objectives with the Montreal Protocol, which entered into force in 1989 to protect the ozone layer by phasing out the production of numerous chemical substances. Regarding chlorofluorocarbons for example, each of the 196 parties committed to making sure that:

- From 1991 to 1992 its levels of consumption and production of the controlled substances in Group I of Annex A do not exceed 150 percent of its calculated levels of production and consumption of those substances in 1986.
- From 1994 its calculated level of consumption and production of the controlled substances in Group I of Annex A does not exceed, annually, twenty-five percent of its calculated level of consumption and production in 1986.
- From 1996 its calculated level of consumption and production of the controlled substances in Group I of Annex A does not exceed zero.

It was then in Johannesburg in 2002 that the international community decided to go for time-bound, quantified objectives for biodiversity, for example on networks of protected areas, fish stocks and – obviously – the 2010 biodiversity target. The latter had a clear time frame and was at least implicitly quantified.[18]

[17] Jolly notes that "since the United Nations Development Decade of the 1960s, governments have agreed in the UN on a number of time bound quantitative goals as guidelines and benchmarks to influence national and international action and development assistance". R. Jolly, *Global goals – The UN experience*, Human Development Report Office, Background paper for HDR, UNDP, 2003.

[18] The 2010 biodiversity target would have been a fully quantitative objective if we could precisely assess the variation of the rate of biodiversity loss – which we cannot.

1.2. THE SAD STORY OF THE 2010 TARGET

1.2.1 What exactly was this target?

The 2010 target has actually been formulated in many different ways. Initially, the European Union first proposed that "a halt to the loss of biodiversity should be achieved by 2010."[19] This was confirmed by the Council, which noted that "biodiversity decline should be halted with the aim of reaching this objective by 2010"[20] and included in the EU Sustainable Development Strategy adopted at the same meeting that aimed "to protect and restore habitats and natural systems and halt the loss of biodiversity by 2010." The sixth environment programme then included "to protect and restore the structure and functioning of natural systems and halt the loss of biodiversity both in the European Union and on a global scale by 2010."[21]

At the global level, the Conference of the Parties to the CBD, in April 2002, discussed a proposal to be included in the "Vision by 2010"[22] wherein the "current rate of biodiversity loss is effectively reduced at the global, regional, subregional and national level" and finally adopted "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on earth."[23] During the same COP, the ministerial segment adopted yet another phrasing of the 2010 target,

---

[19] European Council, *Conclusions of the 2235th Council meeting* environment, 6th Environment Action Programme, 7 June 2001.
[20] Presidency Conclusions of the EU Summit in Gothenburg, 14-15 June 2001.
[21] Adopted by the European Commission and then endorsed by the Council through the Gothenburg strategy in June 2001.
[22] Conference of the Parties to the Convention on Biological Diversity, Report of the Open-ended Inter-sessional Meeting on the Strategic Plan, National Reports and Implementation of the Convention on Biological Diversity, Annex to recommendation 1 of Document UNEP/CBD/COP6/5, 6th Conference of the Parties, 7–19 April 2002, <http://www.cbd.int/doc/meetings/cop/cop-06/official/cop-06-05-en.pdf>.
[23] Conference of the Parties to the Convention on Biological Diversity, *Strategic Plan for the Convention on Biological Diversity*, 6th Conference of the Parties, Decision VI/26, 7-19 April 2002, <http://www.cbd.int/decision/cop/?id=7200>.

> *We acknowledge that life is on the line and therefore resolve to strengthen our efforts to put in place measures to halt biodiversity loss, which is taking place at an alarming rate, at the global, regional, sub-regional and national levels by the year 2010.*[24]

The same declaration then calls upon "the World Summit on Sustainable Development to: (…)(d) Reconfirm the commitment to have instruments in place to stop and reverse the current alarming biodiversity loss at the global, regional, sub-regional and national levels by 2010." Finally, the Johannesburg summit adopted "the achievement by 2010 of a significant reduction in the current rate of loss of biological diversity."[25] One can only be struck by the variety of formulations adopted in different arenas, which contrasts with the fact that at the time of the adoption no one had any accurate idea what the rate of biodiversity loss could be.

In decision VII/30, the 7th Conference of the Parties (COP 7, 2004) decided to establish 11 goals and 21 sub-targets for each of the identified focal areas,[26] to clarify the 2010 Biodiversity Target and promote coherence among the programmes of work of the Convention by providing a flexible framework within which national and/or regional targets may be developed.

1.2.2 A four-step process

a) Adoption with enthusiasm (2003-2008)

Although the discussion on whether to aim at halting or reducing the loss was thorny, the 2010 targets, in their various forms, were promptly and widely adopted with much enthusiasm – perceived as a first and maybe unique opportunity to finally include biodiversity in the global agenda. A non exhaustive list of adoptions includes:

- On 23rd of May, 2003,[27] the European Council of Ministers adopted: "We (...) reinforce our objective to halt the loss of biological diversity at all levels by the

[24] *The Hague Ministerial Declaration of the Conference of the Parties to the Convention on Biological Diversity*, 26 April 2002, <http://www.cbd.int/doc/meetings/cop/cop-06/other/cop-06-min-decl-en.pdf>.
[25] *Plan of Implementation of the World Summit on Sustainable Development*, §44, Johannesburg Summit 26 August-4 September 2002, <http://www.cbd.int/doc/meetings/cop/cop-06/other/cop-06-min-decl-en.pdf>.
[26] Convention on Biological Diversity, *2010 Biodiversity Target, Goals and Sub-targets*, <http://www.cbd.int/2010-target/goals-targets.shtml>.
[27] Submitted by The Council of the Pan-European Biological and Landscape Strategy through the Ad Hoc Working Group of Senior Officials, *Kyiv Resolution on Biodiversity*, Fifth Ministerial Conference, Environment for Europe, Kiev, 21-23 May 2003,

year 2010, and to work towards it through concerted actions and a joint commitment."

- In September 2005,[28] the 60th General assembly of the United Nations, during the world Summit, agreed that "all States will fulfil commitments and significantly reduce the rate of loss of biodiversity by 2010."
- On the 17th of March, 2007, the G8 Council of Environment Ministers adopted the Potsdam Initiative which states that:

> *Focussing all our efforts on the achievement of the 2010 target of significantly reducing the loss of biodiversity in the coming years, we acknowledge the urgent need to halt human induced extinction of biodiversity as soon as possible.*

- On 22 may 2007, the United Nations General Assembly decided to include the 2010 target in the objectives of the Millennium Development Goals – since biodiversity was remarkably absent from the MDGs in 2000. Target 7c was adopted: "Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss."
- On the 2nd of May 2008,[29] the G8 Council of Ministers adopted the following: "Deeply concerned by the continued loss of biological diversity (...), and acknowledging that unprecedented efforts will still be needed to achieve by 2010 a significant reduction of the current rate of biodiversity loss..."

b) Easy implementation (2004-2009)

Parallel to the adoption process, it was quickly recognised that tools were necessary to turn the decision into action. The focus was placed on two main issues: action plans and indicators.

Action plans were developed both at the global level with the programme of work of the CBD, and at the national level with national Biodiversity Strategies and Action Plans – although few of them fully accounted for the real implications of reaching the 2010 target.

<http://www.unep.ch/roe/documents/biodiv/kiev_conference/documents/biodiv_resolution_e.pdf>.

[28] Although the US is not a Party to the CBD, it was part of the Johannesburg Summit and of the United Nations General Assembly, and is therefore also committed, but in a different way.

[29] *Kobe Declaration*, 24-27 October 2004, Kobe Japan, <http://www.worldsocialpsychiatry.org/PDF/WASP_Kobe_Declaration_10_31_04.pdf>.

On the other hand, after the initial enthusiasm, experts soon recognized that no synthetic information was available on the current rate of biodiversity loss. In 2004, the 7th Conference of the Parties agreed on a provisional list of indicators to assess and communicate progress at the global level towards the 2010 target.[30] Then, in 2006, the 8th COP finalized a framework of indicators,[31] with some ready for immediate testing and use and others requiring more work. During that same year a global initiative (the 2010 Biodiversity Indicators Partnership,[32] or "2010 BIP") was established to track progress towards achieving the CBD 2010 biodiversity target, and to enhance collaboration between organisations from around the world involved in the development of indicators. The aim was to provide a source of global information to help decision-makers reduce biodiversity loss. Funding was secured in June 2008 and the first indicators were published by mid 2009 – too late to take action but just in time to ascertain failure.

c) Anguished concern (2006-2009)

The proximity of the deadline however soon started generating some anxiety and several organisations and states began delivering alarming messages. For instance, during the Ministerial segment of the COP of CBD in Curitiba (2006), Marina Silva, Brazilian Minister of environment, urged Countries to "act more quickly at all levels if we are to achieve the objectives of the Convention and the 2010 target." She also provided an explanation for the poor progress made: "What is lacking is the political will."

d) Acknowledgement of failure (2006-2010)

As mentioned in introduction, the likeliness of failure was first formally expressed in 2006 in the Second Global Biodiversity Outlook. Nevertheless, the message remained relatively confidential, for obvious reasons, until 2008. It was at this time that the mechanics accelerated, with, for example, the European Commission recognizing in

---

[30] Conference of the Parties to the Convention on Biological Diversity, *Strategic Plan: Future Evaluation of Progress*, 7th Conference of the Parties, Decision VII/30, 9-10 February 2004, <http://www.cbd.int/decision/cop/?id=7767>.

[31] Conference of the Parties to the Convention on Biological Diversity, *Framework for Monitoring Implementation of the Achievements of the 2010 Target and Integration of Targets Into the Thematic Programmes of Work*, 8th Conference of the Parties, Decision VIII/15, 20-31 March 2006, <http://www.cbd.int/decision/cop/?id=11029>.

[32] For the 2010 Biodiversity Indicators Partnership, please refer to the website: <www.twenty.net.>

2008 that the European Union would not meet its objective,[33] or the Syracuse G8 meeting declaration (April 2009) including,

> *We also acknowledge that, despite international efforts to date, including within the framework of the Convention on Biological Diversity (CBD), the rate of biodiversity loss is increasing, exacerbated by climate change and impacts of human activities.*[34]

In the same vein, the European Environment Agency published a report[35] on progress made towards the European 2010 biodiversity target which announced that "the target of halting biodiversity loss in Europe[36] by 2010 will not be achieved." Time is now up and reality is simple:

> *The target agreed by the world's Governments in 2002, "to achieve by 2010 a significant reduction of the current rate of biodiversity loss at the global, regional and national level as a contribution to poverty alleviation and to the benefit of all life on Earth", has not been met.*[37]

1.3. INSISTING AND REMAINING HOPEFUL OR PERSISTING IN ERROR? THE NEW BIODIVERSITY TARGETS FOR 2020 AND BEYOND

As early as mid 2009, when preparing the new strategic plan of the CBD to be adopted at COP 10 in Nagoya (October 2010), the Secretariat of the CBD proposed to establish a new, "ambitious but realistic," target in the form of a general long term objective or "vision" for 2050 along with a "mission" and a set of five "strategic goals" as well as 20 targets for 2020. This proposal promptly received much support and several meetings included the idea in their agenda, which marked the beginning of a

[33] Communication de la Commission au Conseil, au Parlement Européen, au Comité Economique et Social Européen et au Comité des Régions, *Evaluation à Mi-parcours de la Mise en Œuvre du Plan d'Action Communautaire en Faveur de la Diversité Biologique*, COM (2008) 864, Bruxelles, 16 Décembre 2008, <http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/bap_2008_fr.pdf>.

[34] G8 Leaders, Declaration on Responsible leadership for a sustainable future, G8 Summit, L'Aquila, Italy, 8-10 July 2009, <http://www.g8italia2009.it/static/G8_Allegato/G8_Declaration_08_07_09_final,0.pdf>.

[35] European Environment Agency, Progress Towards the European 2010 Biodiversity Target, EEA Report n°4/2009, Copenhagen, 22 May 2009, <http://www.eea.europa.eu/publications/progress-towards-the-european-2010-biodiversity-target.>

[36] The wording "Europe" is important: in fact, when adopted by the Goteborg meeting, the target concerns all European Union, therefore including overseas territories.

[37] Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 3*, Montreal, Canada, 2010.

new process. The CBD Secretariat organised, from the 18th to the 20th of January 2010 in London, an "Informal Expert Workshop on the updating of the Strategic Plan of the Convention for the post-2010 period"[38] to discuss the potential content of 20 targets. UNESCO, launching the International year of biodiversity,[39] organised a "Biodiversity Science-Policy Conference" in Paris from the 25th to the 29th of January 2010 while Spain, in the framework of its EU presidency, organised a conference on the 26th and 27th of January on the "Post-2010 Biodiversity Vision and Target." In February 2010, the Norwegian government organised a conference in Trondheim[40] entitled, "Getting the biodiversity targets right – working for sustainable development."

Finally, the formal process officially started at the 14th meeting of the CBD Subsidiary Body on Scientific, Technical and Technological Advice (SBSTTA)[41] and continued at the third meeting of the Working Group on the Review of Implementation (WGRI, Nairobi, May 2010). The SBSTTA undertook a thorough examination of the proposed framework and provided recommendations to the WGRI.

The discussions in the WGRI were lengthy and difficult, with some countries pushing for ambitious and precise targets while others resisted and promoted vague phrasing. Several developing countries in particular tried to block the discussions until significant progress would be made on financing the implementation of the CBD programme of work. A great part of the text on the targets was put in brackets, while there was a consensus for the indicators to be discussed afterwards and adopted at COP 11, in 2012. The 2020 targets were then further negotiated and adopted in Nagoya in October 2010 as part of the 2011-2020 Strategic Plan[42]. The "vision" of this Strategic Plan is a world of "Living in harmony with nature" where "By 2050,

[38] Convention on Biological Diversity, Meeting Documents, Informal Expert Workshop on the updating of *the Strategic Plan of the Convention for the post-2010 period*, London, United Kingdom, 18-20 January 2010, <http://www.cbd.int/doc/?meeting=EM-StratPlan-01>.

[39] For further information on the conferecne, please refer to: UNESCO IYB, *Biodiversity Science-Policy Conference*, UNESCO Headquarters, Paris, 25-29 January 2010, <http://portal.unesco.org/science/en/ev.phpURL_ID=8090&URL_DO=DO_TOPIC&URL_SECTION=201.html>

[40] For further information on this conference, please refer to: *2010 Calls for New Biodiversity Targets*, Trondheim Conference on Biodiversity 2010, Trondheim, Norway February 1-5, 2010, <http://www.trondheimconference.org/>.

[41] Convention on Biological Diversity Subsidiary Body on Scientific, Technical and Technological Advice, Examination of the Outcome-oriented Goals and Targets (and Associated Indicators) and Consideration of their Possible Adjustement for the Period Beyond 2010, 14th Meeting, Nairobi, 10-21 May 2009, <http://www.cbd.int/doc/meetings/sbstta/sbstta-14/official/sbstta-14-10-en.pdf>.

[42] Conference of the Parties to the Convention on Biological Diversity, *Updating and Revision of the Strategic Plan for the Post-2010 Period*, Decision as adopted (advance unedited text), 10th Conference of the Parties, Nagoya, Japan, 2 November 2010, <http://www.cbd.int/nagoya/outcomes/>, last accessed 8 December 2010.

biodiversity is valued, conserved, restored and wisely used, maintaining ecosystem services, sustaining a healthy planet and delivering benefits essential for all people." The "mission" is to "take effective and urgent action to halt the loss of biodiversity in order to ensure that by 2020 ecosystems are resilient and continue to provide essential services, thereby securing the planet's variety of life, and contributing to human well-being, and poverty eradication."

The 5 strategic goals and 20 targets were also adopted, and we shall come back to them in more detail in section 3.

2. GOALS FOR GOVERNANCE: AN ACTION-ORIENTED ANALYSIS OF GLOBAL BIODIVERSITY TARGETS

2.1. OBJECTIVES BEHIND THE GOAL: PRAGMATIC EXPECTATIONS AND UNREASONABLE HOPES

The first reasonable question to ask when considering global biodiversity targets is "what do we expect from them?" Surprisingly, this has hardly been made explicit for the 2010 target and has been the subject of little (public) debate.

A first indication is provided by the CBD Secretariat,

> *Targets are increasingly being used in various areas of public policies. Clear, long term outcome-oriented targets that are adopted by the international community can help shape expectations and create the conditions in which all actors (...) have the confidence to develop solutions to common problems. By establishing targets and indicators, progress can be assessed and appropriate actions taken.*[43]

From the literature review and interviews we conducted, four key pragmatic objectives arise from the conservation community:

- Mobilizing: As translated by the Countdown 2010 endeavour, global biodiversity targets are seen as having the potential to help mobilize a wider audience than the "usual" one. They are also supposed to firmly establish biodiversity on the global agenda – which implies that it is not the case at present.
- Legitimizing: Having targets is also expected to support biodiversity constituencies in their advocacy towards other segments of society (governments, private sectors etc.). In other words, globally approved and UN-

[43] Convention on Biological Diversity, *2010 Biodiversity Target, Why Set a Target?*, last updated on 1st June 2007, <http://www.cbd.int/2010-target/background.shtml>. Translation by the author.

labelled targets are supposed to legitimize, in the socio-political arena, a concern that in practice still belongs only to a minority.

- Increasing funding: Mobilizing and legitimizing are in turn believed to help fundraising for conservation, which has been a constant concern. This is a fundamental pattern of goal setting in the UN / development sphere, as related by Pacquement:

> *Mc Namara, appointed as President of the World Bank in 1968, develops strategic processes: the first country strategies emerge and contribute, by formulating quantitative objectives, to consolidate the plea for increasing ODA.*[44]

- Improving knowledge: Having clear targets is said to be the best incentive for developing and improving indicators, science and knowledge about biodiversity – another widely shared concern within the conservation community as mentioned in the introduction.

Whereas these four objectives are shared by the development community when setting goals, a fifth one is often mentioned with respect to the MDGs but is singularly absent from the biodiversity targets debate: "naming and shaming."[45] The fear of turning specific governments or stakeholders against biodiversity seems to justify this omission, in a context where those who act the least are often also those who can do the most damage.

Beyond such pragmatic objectives, it looks like actually achieving the 2010 target was, as far as biodiversity is concerned, an unreasonable hope. The "pragmatic objectives" behind the target may therefore have been more important than the target itself. One could then argue that we face a bidirectional relationship, whereby we set targets to make progress on the pragmatic objectives, which in turn is supposed to help approach the targets.

We already quoted Fisher in the introduction when asking whether there were any conservationists who had a realistic expectation back in 2002 that the CBD target could be achieved. Ironically, it means that only the public – and probably some ill-informed or overenthusiastic decision-makers – could think it was a true objective for the conservation community, one possible to achieve. Aiming at achieving a significant reduction in the rate of loss (or halting or reversing it) probably did not even

---

[44] F. Pacquement, "Bâtir des politiques globales: l'aide au développement, source d'inspiration?", *Afrique contemporaine*, Vol. 3, n° 231, 2009, pp. 265-282. Translation by the author.
[45] *Ibid.*

sound ambitious to these believers. One lesson we can take away from this is that setting an objective and having it approved at the highest UN level does not mean that there is an actual commitment to reach it. Reducing biodiversity loss would have major development implications worldwide: the fact that the 2010 target was not the result of a long and painful negotiation (if compared to "hard politics" like trade barriers removal or nuclear non-proliferation) can be interpreted as a clear sign that the international community was not ready to do what it would take.

2.2. THE LOGIC BEHIND THE TARGET

Beyond what the conservation community concretely expects when setting global biodiversity targets, it is important to understand the context within which such a choice was made to appear appropriate. Four factors seem to be at play.

Most basically, there is an increasing sense of the urgency and intensity surrounding the challenge to tackle. Undoubtedly, the 2010 and 2020 biodiversity targets partly translate growing awareness that unprecedented action has to be taken, and that it cannot be postponed any longer.

Secondly, as noted earlier (1.1), there would probably be no time-bound, verifiable targets if not for the repeated, overall failure of conservation efforts at the global level, regardless of the ever growing financial resources put into conservation. Whatever the local success stories, they have not proved adequate to spread as far as they are needed[46] and there is scepticism as to whether they actually indicate the way forward – i.e., how to change the development path. This is exactly the reason why the MDGs were put on the agenda: relentless inefficiency of poverty alleviation policies and development aid despite the rising budgets devoured, in a context of vague objectives.

Thirdly, there is a worrying though understandable tendency within the conservation community, facing persistent disappointment, to try and replicate what seems to be working in other policy areas. This is especially true of climate change with the Stern and then Sukhdev reviews,[47] the IPCC then IPBES, the 2020 and 2050 targets, the desperate search for unified biodiversity metrics that would match the ton of CO_2 and

[46] R. Billé, "Action without change? On the use and usefulness of pilot experiments in environmental management", *Surveys and Perspectives Integrating Environment and Society (Sapiens)*, vol. 3, n° 1, 2010, pp. 1-6.
[47] The Economics of Ecosystems and Biodiversity (TEEB), <www.teebweb.org>.

be marketable. The fact that the climate negotiation, science and governance have not concretely taken the fight against climate change any further than the one against biodiversity erosion is usually overlooked. Indeed, the undebatable willingness to learn lessons from other policy areas often comes as an irrational fascination for quantification. Unsurprisingly, economists in general are the champions of this stream: as Balmford, Crane *et al.* put it, "conservation scientists have a lot to learn (...) from economists, who have long had a set of common and clear indicators for tracking and influencing market development," taking the example of "gross domestic product (GDP) and financial indicators like the Dow Jones [which] have set a precedent."[48]

Disturbing as it may be, such reasoning is part of the picture for some of the most influential conservation thinkers, although of course, it is not the only grounds for setting global biodiversity targets.

Finally, setting global biodiversity targets converges with the development, over the last four decades, of programme and public policy evaluation within the framework of an increased concern about accountability. It translates to the use of logical framework approaches and results-based management in development cooperation, with the US Congress in particular calling for more measurable outcomes of development aid. It is in this context that the MDGs, taking their roots in OECD in 1996,[49] were adopted in 2000 in connection to (supposedly) increasing pressure on public expenses and deficits.

This approach has been coined 'New Public Management' (NPM), a "heterogeneous body of ideas and recipes inspired by economic and management theories."[50] Bezes describes NPM as a protean doctrine of an ambiguous status that developed progressively over the 1980s and 1990s until it became vastly prevalent in international debates on public action. It is based on mainstream economic theory, operational experiences from public administration reforms (especially in Anglo-Saxon countries), and international organisations practices (OECD, World Bank etc.). This is how, as noted by Mace, "setting targets has become an increasingly common part of working life."[51] And it is because New Public Management seems so self-evident, so close to common sense, that little analytical or critical literature has been produced to challenge its consequences in the development or environment fields.

---

[48] A. Balmford, P. Crane *et al, op. cit*.
[49] S. Devarajan, M.J. Miller, and E.V. Swanson, *Goals for development. History, prospects and costs*. The World Bank, Policy Research Paper 2819, 2002.
[50] P. Bezes, "Le renouveau du contrôle des bureaucraties. L'impact du New Public Management", *Informations sociales*, Vol. 126, 2005, pp. 26-37. Translation by the author.
[51] G.M. Mace, "An index of intactness", *Nature*, vol. 434, 2005, pp. 32-33.

2.3. "MANAGING BY OBJECTIVES" AND THE QUESTIONABLE PRACTICE OF NEW PUBLIC MANAGEMENT FOR GLOBAL BIODIVERSITY GOVERNANCE

A key component of New Public Management is what Drucker originally labelled "managing by objectives" in organisations,[52] which clearly looks like the theory of management behind the setting of global biodiversity targets. Its founding principles are to agree upon objectives, to allocate specific responsibilities to specific agents, based on co-elaborated objectives hence appropriated by the people in charge. These objectives can be individualized or collective ones, and are supposed to be both ambitious and realistic. Essentially, management by objectives aims at clarifying roles and responsibilities, based on the assumption that this increases motivation, commitment and eventually performance. As stated by Devarajan, Miller and Swanson, "in many contexts, setting goals and monitoring performance against agreed targets has proved to be a successful strategy for mobilizing resources and improving results."[53]

However, critics of NPM in general and management by objectives in particular have made a number of points which are useful to understand the limits of such management approaches for global biodiversity governance:

- Managing by objectives tends to over-emphasize the setting of targets over the working of a plan as a driver of outcomes. This has been one of the most common arguments against the 2010 target: it did not come with a work plan that could produce the desired outcome. The very idea of having a work plan associated to the target actually emerged only in 2009.
- Managing by objectives also underemphasizes the importance of the environment or context in which the targets are set and in which they are supposed to be achieved. External factors like the price of commodities[54] or an economic crisis can have more influence on the fate of biodiversity than conservation efforts themselves.
- Furthermore, Devarajan, Miller and Swanson comment that "for goals to be useful, they must be well defined and measurable; they must be agreed upon

[52] P. Drucker, *The practice of management*. Harper Business, 1954.
[53] S. Devarajan, M.J. Miller, and E.V. Swanson, *op. cit*.
[54] Combes *et al.* demonstrate the highly significant correlation between unstable prices for agricultural commodities and deforestation in the tropics over the past decades. Well-known examples include the price of beef in Brazil or coffee in Sumatra, Indonesia. J.L. Combes, R. Pirard, and P. Combes Motel, "A methodology to estimate impacts of domestic policies on deforestation: Compensated Successful Efforts for 'Avoided Deforestation' ", *Ecological Economics*, vol. 68, 2009, pp. 680-91.

by those who set the strategies and appropriate the resources to pursue them; and they must be attainable under some plausible scenario."[55] In the case of biodiversity, if the target for 2010 was neither very well defined nor measurable, we would not argue that this is the reason we failed. In addition, there was probably as widespread formal support as there will ever be. However, it seems that it could not be attained under any plausible scenario. If we follow the authors' argument based on decades of multi-sector experiences, this may have severely hindered the impact of the 2010 target.

- Besides, as rightly pointed out by Easterly,[56] and building on Mullins and Komisar,[57] setting goals in the public policy arena obviously takes inspiration from private entrepreneurship. But successful entrepreneurs very often change their goals to adapt to changing environments, markets, demands and so on. Therefore it is questionable whether the entrepreneurship model is at all suited for complex processes like development or biodiversity conservation, where the only thing we know is that we do not want to change the fundamental objective of biodiversity conservation.
- Lastly, Amar and Berthier argue that the environment as well as the degree of complexity of public and private sectors cannot compare.[58] According to them, public management is fundamentally different and more difficult than private management.[59] The assumption that this may have been overlooked when setting targets for biodiversity is supported by the tendency within big international conservation NGOs to hire CEOs or managers coming from the private sector, especially the banking and financial sectors where high level managers seem to regularly attain or even surpass their individual and organizational objectives.[60]

In other words, one big issue appears to be that we set clear targets as if we were managing biodiversity like a business or an infrastructure. However, the way

[55] S. Devarajan, M.J. Miller, and E.V. Swanson, *op. cit*.
[56] W. Easterly, Aid Watch, *Set a Big Goal. Give All to Meet It. This is Stupid*, October 2nd, 2009, <http://aidwatchers.com/2009/10/set-a-big-goal-give-all-to-meet-it-this-is-stupid/>, last accessed on 30 July 2010.
[57] J. Mullins, and R. Komisar, *Getting to plan B: Breaking Through to a Better Business Model*, Harvard Business Press Book, 2009.
[58] A. Amar, and L. Berthier, *Le Nouveau Management Public: avantages et limites*, Revue du Réseau d'enseignants, chercheurs et experts en management public, December 2007.
[59] *Ibid*.
[60] For example, The Nature Conservancy appointed Mark Tercek as CEO in 2008. Tercek was formerly the Managing Director at Goldman Sachs and Head of the Goldman Sachs Center for Environmental Markets, as well as the firm's Environmental Strategy Group.

biodiversity is managed in practice is the result of a complex web of actions where dedicated conservation efforts play only a limited if not a minor role. If this is not unique, it is specific to policy areas where the "agency in charge" is relatively weak given the vastness of its purpose, as opposed for instance to the transport policy. As Easterly asks about the MDGs: "How can you hold somebody accountable for something they don't control?"[61] This calls for further exploration of the issues of accountability of and responsibility in attaining global biodiversity targets.

2.4. WHO IS RESPONSIBLE ANYWAY? THE AMBIGUOUS NATURE OF THE RESPONSIBILITY AND THE MYSTERY OF THE AGENCY IN CHARGE

The way the 2010 targets were conceived and formulated made it challenging to derive clear responsibilities concerning their implementation. Beyond the headline target for 2010 of achieving a significant reduction in the current rate of biodiversity loss at the global, regional and national level, all sub targets were formulated with reference to biodiversity and ecosystems themselves. Because, as we underlined earlier in this paper, there is no clear, global, causal relationship between specific actions and the status of biodiversity, it was virtually impossible to draw lines of responsibility between actors and obligations. The following examples show how these targets failed to implicitly name the specific stakeholders on which pressure could then be placed, who could be "named and shamed"[62]:

- Target 1.1: At least 10% of each of the world's ecological regions effectively conserved.
- Target 2.1: Restore, maintain, or reduce the decline of populations of species of selected taxonomic groups.
- Target 3.1: Genetic diversity of crops, livestock, and of harvested species of trees, fish and wildlife and other valuable species conserved, and associated indigenous and local knowledge maintained.
- Target 4.3: No species of wild flora or fauna endangered by international trade.
- Target 7.2: Reduce pollution and its impacts on biodiversity.

---

[61] W. Easterly, 2009, *op. cit*.
[62] Convention on Biological Diversity, *Goals and Targets*, *op. cit*.

- Target 11.1: New and additional financial resources are transferred to developing country Parties, to allow for the effective implementation of their commitments under the Convention, in accordance with Article 20.

Thus, one of their main characteristics was that no one could easily be held responsible for the success or failure of their realization. As we shall see, this had three dimensions: legal, multilateral and national.

From a legal point of view, the status of the 2010 biodiversity target was ambiguous. Established by Decision VI/26 of COP 6, the 2010 target was of a legal nature like any international environmental treaty. However, it was confined to the realm of soft law by its phrasing: the "reduction of the current rate of biodiversity loss" was supposed to be "significant," which was as vague as it could be. In other words, the target was a legal, but not legally-binding, objective for the parties to the CBD. According to the 1969 Vienna Convention on the Law of Treaties, this still meant that all parties should implement it in good faith – they should, for example, have made sure their action plans and budgets were consistent with the objective. As in the case of most international environmental agreements however, there was no compliance or punishment mechanism.

The CBD, as a public international law, directly applies to contracting parties, i.e., states. Therefore the question of who is responsible, or who is tied to the achievement of the biodiversity targets, could seem to have a simple answer. Along that line, the CBD Secretariat's answer, for instance, may sound straightforward: "All the parties to the CBD have committed themselves to achieving the 2010 biodiversity target." In the same vein, the Global Biodiversity Outlook 2 report stated that "primary responsibility for meeting the 2010 target of significantly reducing the rate of biodiversity loss lies with parties to the Convention."[63]

However, the CBD does not distribute responsibility, meaning that the objectives to be attained are collective. Hence the fact that the "significant reduction of the current rate of biodiversity loss" that should happen "at the global, regional and national level" did not mean that each member state was legally committed to reducing the rate of loss within its boundaries. On the contrary, it was the parties, as a group, that were committed to reducing the rate of loss in each country. If country A did not achieve it, the responsibility would become global. This may be the case if, for example, country A did not receive adequate technical assistance from other parties, or because of the effects of climate change.

[63] Secretariat of the CBD, 2006, *op. cit*.

With this in mind, the COP 10 decision adopting the new Strategic Plan states that,

> *The extent to which developing country Parties will effectively implement their commitments under this Convention will depend on the effective implementation by developed country Parties of their commitments under this Convention related to financial resources and transfer of technology.*

While this makes sense in the spirit of the Convention, it is one of its blind spots, if not one of its weaknesses: Easterly observes that "collective responsibility (…) can't result in progress,"[64] although it can be useful for monitoring purposes.

Outside the CBD framework, as Balmford, Bennun *et al*. put it, "representatives of 190 countries [including the US this time] at the 2002 Johannesburg World Summit on Sustainable Development committed themselves to…," and "by adopting the 2010 target, governments are explicitly recognizing the value of biodiversity, setting goals for its conservation, and holding themselves accountable."[65] Words indeed matter: in this non-legal framework, governments or heads of States commit themselves, meaning that their respective countries are accountable – they will report on progress made – but not responsible... Moreover, Easterly underlines that,

> *191 leaders, not countries, have signed [the MDGs]. (...) Advocates enthusiastically advertised that 189 leaders signed the Millennium Declaration in 2000, but that was actually a sign of weakness rather than strength. Does an agreement have teeth when everyone agrees – including many oppressive governments who had no more interest in alleviating poverty than in promoting Brussels sprouts? And if the agreement is broken, how can you find who is to blame, when 189 leaders (not to mention dozens of international organizations and NGOs) are collectively responsible?*[66]

From a multilateral perspective, the responsibility gap is just as hampering. According to Jolly, experiences with international goal setting "show the importance of an individual UN agency making support for the achievement of a specific goal an explicit and high profile corporate objective."[67] With no single UN agency formally responsible for biodiversity – who would hold UNEP or the CBD Secretariat responsible for not

---

[64] W. Easterly, *op. cit*.
[65] A. Balmford, L. Bennun *et al, op. cit.*
[66] W. Easterly, *op. cit.*
[67] R. Jolly, *op. cit*.

achieving the biodiversity targets? - some would argue that these targets were bound to fail. A "utopian, feel-good scheme"[68] as Easterly called the MDGs...

The national level of responsibility allocation is then worth exploring. Beyond the collective responsibility of states, at the national level "it's all down to governance and politics."[69] But what kind of governance, and what kind of politics? Two points need to be made here. Firstly and "vertically," states as actors have real but limited power over how biodiversity is managed. Local governments, NGOs and the private sector today are important players with which states have to coordinate to achieve international commitments. Secondly and "horizontally," sectoral administrations and stakeholders have to be convinced and mobilized by conservation administrations. Formally of course, once adopted nationally and internationally, biodiversity targets do not commit only environmental actors. However in practice they emerge from the environmental community, and are adopted and validated by states and international organisations, but usually lack appropriation by other sectors whose role in biodiversity erosion is key.

A responsibility paradox then appears: on the one hand, those responsible for conservation action (be they administrations or NGOs), cannot be held responsible for failure, since they are the ones trying hardest, having little power and facing fierce resistance. On the other hand, the ones resisting (be they administrations, NGOs or private companies) may be responsible for failure, but cannot be formally blamed for it since they are not in charge of achieving conservation targets. This paradox has to be addressed if global biodiversity targets are really going to lead to concrete actions, pressures, responses, and changes. It is one more reason that the "name and shame" strategy mentioned above does not apply to biodiversity in a straightforward way. We shall see below how this may be partly overcome.

2.5. IF WE HAVE NOT ACHIEVED THE TARGET, WHAT HAS THE TARGET ACHIEVED?

The critics above could easily lead one to believe that global biodiversity targets are useless. As Jolly already remarked at a general level,

---

[68] D. Herman, "Foreign Aid Must Focus on Smaller Goals – WEF", *IOL News*, June 2nd 2006, Accessed on 30 July 2010.
[69] M. Fisher, *op. cit.*

> *conventional wisdom and casual international hearsay has it that it is easy enough for governments to agree such goals and that in consequence, they have little meaning, have rarely been taken seriously and have seldom been achieved.*[70]

However, "contrary to much opinion, many of these goals have had a major influence on subsequent action."[71] Therefore, it seems useful to try and assess what exactly the 2010 target has accomplished. Have the "pragmatic objectives" presented earlier seen any success? Answering such a question moves the key consideration away from "Have we achieved the goal?" (the answer is a straightforward "no"), to "What has the goal achieved?" Jolly insists that achievement should not only be judged in relation to, for example, the number of countries that have attained the goal quantitatively by the target date, but also to significant advances made despite failure to reach the goal by the target date, such as establishing institutional structures to ensure better conservation. The problem of course is then to be able to attribute observed change (e.g. in mobilization, funding, legislation, or scientific efforts) to the targets.

According to the available literature, the overall assessment would be that the 2010 targets had some positive impacts, but also serious limitations. The Council of the European Union (2010) found that "these targets have (…) been essential in generating useful actions in favour of biodiversity," in agreement with – though more enthusiastic than – Fisher diagnosing that "undoubtedly some benefits have come as a result of the target, especially with respect to indicators and assessment, mobilization of new audiences and adoption of new policy frameworks."[72] The CBD High-level Working Group on the future of global targets for biodiversity, slightly more critical, assessed that "the 2010 target provided a valuable framework for biodiversity actions, but missed the opportunity to mobilize significant public support and harness adequate political commitment."[73] If we come back to the "pragmatic objectives" proposed in 2.1 (mobilizing, legitimizing, increasing funding and improving knowledge), the clearest outcome seems to concern the latter, with most authors (cf. those quoted in introduction for work on science and indicators) underlining the key role the 2010 target played as a driver for developing better knowledge and monitoring capabilities at a larger scale. As far as the three other objectives are

---

[70] R. Jolly, *op. cit*.
[71] *Ibid*.
[72] M. Fisher, *op. cit*.
[73] Convention on Biological Diversity, *High-Level Working Group on the Future of Global Targets for Biodiversity*, 9-10 March 2009, Bonn, <http://www.cbd.int/doc/meetings/ind/emind-02/official/emind-02-09-rev1-en.pdf>, accessed on 15 September 2010.

concerned, it would be hazardous to attribute improvements or degradations to the influence of the 2010 target. For instance, conservation funding has increased globally over the period 2002-2010, but this may have been the case anyway – there is no counterfactual scenario. We could therefore join Jolly who underlines

> *the need for a more nuanced and disaggregated analysis of the impact of the global goals and, in particular, of the meaning of a "global goal being achieved or not being achieved." Rather the emphasis should be shifted to the extent of implementation and success in the various ways in which goals have an influence.*[74]

Jolly's point, however, also needs to be challenged. What if we had said, 10 years ago: "we need targets to mobilize the population and to stimulate the development of biodiversity indicators – but don't worry, we're not planning to reach them"? Easterly acknowledges that

> *the inspirational enthusiasm and increased efforts surrounding the MDGs probably did contribute to progress on specific efforts and some partial success stories (mainly in health and education), as pointed out in the UN MDG 2009 report. That can give some hope for the future and some solace to the hard-working and deeply committed participants*.[75]

Moreover, he clearly has a point when adding that

> *the point of the MDG campaign was that it precisely defined success and failure using specific goals. So on its own terms, it is a failure. The MDGs will go down in history as a success in global consciousness-raising, but a failure in using that consciousness for its stated objectives.*[76]

Applied to the 2010 biodiversity target, this sounds like a balanced, reasonably optimistic overall diagnosis.

The evaluation challenge that arises here does not, however, prevent advance questioning about the potential encapsulated in the 2020 targets. We will ask such questions qualitatively, according to two criteria:

- What potential do these targets have of achieving progress regarding the four "pragmatic objectives," not in absolute terms but in comparison to the 2010

[74] R. Jolly, *op. cit.*
[75] W. Easterly, *op. cit*.
[76] *Ibid*.

target? And do they have real added value for the fulfilment of such objectives, compared to alternative strategies and instruments?

- What levers do these targets provide so that the progress made on each of the four objectives can be used to take efficient action? The extent to which they help allocate responsibilities will be central here.

3. FORWARD LOOKING ON THE 2020 TARGETS

3.1. WHAT PROGRESS CAN BE EXPECTED FROM THE 2020 TARGETS?

Considered instruments for change, the 2020 targets formally have the same characteristics as the 2010 ones. However, officially adopted at the highest political level, they are not legally binding nor do they benefit from any serious compliance mechanism. They are again a "utopian, feel-good scheme" about which "pragmatic objectives" should not be necessarily higher or lower than they were for the 2010 exercise. Nevertheless, a few key differences in the context may turn out to play significant roles, either positively or negatively.

Mobilizing: We can expect that, as before, the 2020 targets will be relatively successful in getting more people interested in global biodiversity who had not previously been. At the same time, in all likelihood, most citizens will still not have heard about them by 2020, as is the case today, because the magnitude of the communication effort is expected to be of the same order as before. Three risks are to be kept in mind, though:

- The conservation community should be careful with what "mobilization" means. Jolly argues that "the essence (…) is to create a process of world-wide mobilization, built around vision and inspiration, rather than top down, management by objectives."[77]
- The mobilization power of global biodiversity targets may decrease over time as credibility suffers from similar objectives having already been missed.
- Although explicitly aimed at "serving as the basis for the development of communication tools capable of attracting the attention of and engaging stakeholders,"[78] the 2020 mission is phrased in a way ("take effective and

[77] R. Jolly, *op. cit.*
[78] Conference of the Parties to the Convention on Biological Diversity, 2010, op cit.

urgent action to halt the loss of biodiversity...") that may make more sense from a scientific point of view but will not help in mobilizing the masses.

Legitimizing: Here the risk lies with "over-consensus." Naudet rightly underlines that,

> *one of the most striking characteristics of modern political systems is the absence of institutionalized debate arenas where fundamental disagreements may be explored and exposed in a systemic way – not even trying to solve them. More often than not, the very existence of disagreements is not acknowledged, disguised as it is under rhetoric of consensus.* [79]

Contrary to what many think, we argue that far from consolidating legitimacy, consensus contributes to delegitimizing conservation, especially because consensus is usually reached at the price of major sacrifices on conservation objectives. Today's seemingly increasing consensus on conservation has been gained thanks to the unanimous alignment of the conservation community behind the objective of poverty alleviation, often even of development or economic growth. On the contrary, supporters of unchecked economic growth have made few concessions so far.

Increasing funding: Parallel to increased mobilization and legitimacy, conservation funding is likely to increase over the next ten years. It is now part of the Strategic Plan: Target 20 stipulates that,

> *By 2020, at the latest, the mobilization of financial resources for effectively implementing the Strategic Plan 2011-2020 from all sources and in accordance with the consolidated and agreed process in the Strategy for Resource Mobilization should increase substantially from the current levels.*

But if funding increases, will it be thanks to the targets? No one will be able to tell. And will it be enough according to needs assessments? We bet it will not. Here the risk is that, as explained by Pacquement, "aid has taken a strategic risk with the MDGs. Mostly motivated by a logic of plea, these objectives, although adopted recently, have since been identified to aid. Their foreseeable failure lays the ground for a mobilisation crisis on the donor countries' side."[80]

---

[79] J-D. Naudet, *Les OMD et l'aide de cinquième génération. Analyse de l'évolution des fondements éthiques de l'aide au développement. Document de travail*, Agence Française de Développement, n° 2, mai 2005. Translation by the author.

[80] F. Pacquement, *op. cit*. Translation by author.

Improving knowledge: Beyond the existence of a dedicated target,[81] the main difference in the political and institutional landscape regarding biodiversity science and knowledge will surely be the existence of the Intergovernmental science-policy Platform on Biodiversity and Ecosystem Services (IPBES). The IPBES will have as its central mission to synthesize existing science and generate biodiversity assessments at various scales. It will strengthen or create necessary networks and make sure cutting edge, policy relevant literature is made available to decision makers. In that sense, one may wonder what the related added value of the 2020 targets will be, whereas this is often considered the key achievement of the 2010 targets.

More broadly, one should wonder, from a strategic perspective, if the 2020 targets are the best way to make progress on each of these objectives. Indeed, it is not enough for global targets to just help: given the considerable resources needed to set them up and then to keep them alive for ten years, they should be a better way to make progress than potential alternative strategies and instruments applying equivalent resources. This would require further, more detailed examination: in the case of science and knowledge development for instance, it is questionable given that the IPBES should be fully active within the next couple of years.

Eventually, in comparison to other available instruments and strategies, the most peculiar characteristic of global, quantitative and time-bound biodiversity targets is that they are drawn from a specific management technique. As such, and coming back to the “management by objectives” corpus, their main function should be to allow for better allocation and visibility of responsibilities. In other words, if global biodiversity targets should not be a parody of private-sector like management, they should allow for clear definition of who is responsible for what, who fails or succeeds, and they should open the door to rewards and sanctions. We will now analyse whether this is the case.

3.2. ANALYSIS OF RESPONSIBILITY ALLOCATION AND LEVERAGE POTENTIAL

In this final section, we come back to the key question of whether or not the levers provided by the 2020 targets can use the potential progress made on each of the four “pragmatic objectives” to take efficient action. We argue that on their own terms, i.e.,

[81] Target 19: By 2020, knowledge, the science base and technologies relating to biodiversity, its values, functioning, status and trends, and the consequences of its loss, are improved, widely shared and transferred and applied.

from an entrepreneurship perspective, such targets should at least aid in the allocation responsibilities, which would be of major help in a context where the conservation community does not seem, so far, to be keen on resorting to "naming and shaming" – at least not outside the restricted advocacy NGO community.[82]

In that regard, the effort made towards the 2020 targets has been a lot more strategic than the 2010 experience, in that it has led to target setting on "the underlying causes of biodiversity loss,"[83] and on "the direct pressures on biodiversity."[84] For instance, Target 3 says: "By 2020, at the latest, incentives, including subsidies, harmful to biodiversity are eliminated, phased out or reformed in order to minimize or avoid negative impacts (…)." It is feasible, if not easy, to identify who it targets: any administration that provides harmful incentives/subsidies. Biodiversity advocates may therefore appropriate such a target in their daily, intersectoral work, e.g. during the upcoming negotiations on the future of the European Common Agricultural and Fisheries Policies. In the same way, some other targets seem particularly interesting:

- Target 6: "By 2020 all fish and invertebrate stocks and aquatic plants are managed and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits."
- Target 7: "By 2020 areas under agriculture, aquaculture and forestry are managed sustainably, ensuring conservation of biodiversity."
- Target 8: "By 2020, pollution, including from excess nutrients, has been brought to levels that are not detrimental to ecosystem function and biodiversity."

On the contrary, targets under strategic goals C: "To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity," D: "Enhance the benefits to all from biodiversity and ecosystem services," and E: "Enhance implementation through participatory planning, knowledge management and capacity building," are closer to the 2010 sub-targets. They will not help much in an action-oriented perspective, with the exception, perhaps, of target 11 which sets percentage

[82] Contrarily to what happens for instance in the area of human rights.
[83] Conference of the Parties to the Convention on Biological Diversity, 2010, *op cit*., Strategic goal A, targets 1 to 4.
[84] *Ibid*, Strategic goal B, targets 5 to 10.

objectives for protected areas. Targets 12 to 20 will have little strategic leverage – meaningful examples include:

- Target 12: "By 2020 the extinction of known threatened species has been prevented and their conservation status, particularly of those most in decline, has been improved and sustained."
- Target 14: "By 2020, ecosystems that provide essential services, including services related to water, and contribute to health, livelihoods and well-being, are restored and safeguarded, taking into account the needs of women, indigenous and local communities, and the poor and vulnerable."
- Target 15: "By 2020, ecosystem resilience and the contribution of biodiversity to carbon stocks has been enhanced, through conservation and restoration, including restoration of at least 15 per cent of degraded ecosystems, thereby contributing to climate change mitigation and adaptation and to combating desertification."

Taking into account the level of constraints in which the Strategic Plan has been developed (political need to set targets for various reasons on indigenous communities, science, financing...), its partially strategic nature comes as a major step forward in the life of the CBD, and more widely in global biodiversity governance. The usefulness of such a strategic approach to biodiversity targets is indeed not factice. Interestingly, we observed that inter-ministerial discussions at the national level about the 2020 targets often came up against targets that made responsibilities too obvious. In France, a limpid example was unwillingly provided by the Ministry of Agriculture and Fisheries who initially opposed Target 3 as it "directly targeted the Common Agricultural Policy." On the one hand, the Ministry never officially acknowledged that the CAP could be harmful to biodiversity. On the other hand, letting such a target be approved could have consequences for intensive agriculture, which the Ministry strongly supports… This is one of the ways a simple target can have impacts, although it may not make positions change directly. By making responsibilities clearer, fault lines and differences in positions are forced to emerge, which helps outline the "paralysing" actors and eventually make some specific positions undefendable.

CONCLUSION

IN THE END, WILL THE 2020 TARGETS BE ACHIEVED?

Undoubtedly, all 2020 targets expressed with regard to the state of biodiversity seem once again immensely ambitious in a context where:

- The world population will keep increasing to reach an expected 7.6 billion people by 2020,[85] including 1.1 billion in Sub-Saharan Africa and 4.6 billion in Asia where many of the remaining biodiversity hotspots lie.
- Continuous development and economic growth will likely increase each human's impact on nature unless development and consumption are promptly decoupled – which to say the least, is not very likely in the short to medium term.
- Ever less space is left for "natural" areas, with the conversion of such areas to sites of agriculture, infrastructures and urban development continuing at alarmingly high levels. For instance around 13 million hectares of forest were converted to other uses or lost through natural causes each year over the last decade, this is, however, slightly less than the 16 million hectares per year in the 1990s.[86]

What's more, the biodiversity policy area has certain patterns that differ significantly from other policy areas where Jolly[87] identified many successful cases of global objectives. To compare to health objectives, for example:

- Whereas hardly anybody gets huge direct benefits from child mortality, many do from biodiversity overexploitation, pollution etc. Hence biodiversity

[85] Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*, <http://esa.un.org/unpp>, accessed Wednesday, September 15, 2010.
[86] FAO, *Global Forest Resources Assessment 2010, Key Findings*, <http://foris.fao.org/static/data/fra2010/KeyFindings-en.pdf>, accessed on 15 September 2010.
[87] R. Jolly, *op. cit.*

governance is less of a collective action issue and more of a strategic, conflict-prone policy area, which may mean that global, consensual goals are less suited.

- With few exceptions, conservation successes are inescapably temporary, whereas losses are forever. On the contrary, the official eradication of a disease (a health success) is almost always final.
- The equivalent of the ripple effect for health (by which, for example, the unvaccinated benefit from others being vaccinated) is unfortunately a leakage effect for biodiversity: without systemic changes, what we protect somewhere is often taken out/down somewhere else.
- Finally, Jolly points out that "the countries which have experienced most failures are clustered in two groups of countries – Sub-Saharan African and the least developed countries, two categories which overlap."[88] Alas, this is where much of the global biodiversity lies.

With this in mind, being optimistic about the 2020 targets is a challenge. And it is even a greater one when considering that, as noticed by Mace *et al.*, biodiversity targets are "easiest to achieve in cases where biodiversity is already so depleted that rates of loss can only decline."[89] In other words, where biodiversity erosion will slow down in the near future, it will often be because most biodiversity has already been lost. If this is confirmed, it will soon challenge the way targets are being set, and the question of actually attaining the headline objective will become even less relevant.

However, targets dealing with policies and instruments (e.g., eliminating harmful subsidies or creating more protected areas) are ambitious but may well be achieved, provided enough progress is made on mobilizing and legitimizing – in other words strengthening conservation constituencies. Any progress made on these targets will be a progress for biodiversity, even if we do not know exactly to what extent. Moreover, they will allow having a balanced evaluation of progress made in 2020, which should be very welcome.

[88] R. Jolly, *op. cit.*
[89] G.M. Mace *et al*, *op. cit*.

THE KEY QUESTION IS ELSEWHERE

We could water down Easterly's position and ask "why waste any more effort on the MDGs, now that we know they will not be met?" However the answer seems quite clear to us: because the 2020 targets are now a fact, because they will be in the landscape for the next ten years, because they are of a partially strategic nature, we should still try and make the best out of the kind of tool they represent, now and in the future. Jolly puts it convincingly:

> *There is both a need to avoid giving hostages to fortune by encouraging exaggerated expectations just as there is a need to avoid starting with so much caution as to fuel exactly the initial sense of pessimism and discouragement that can become a self fulfilling prophesy and lead to failure. This important but delicate balance needs to be carefully thought through at the early stages. What is the most likely outcome in the different dimensions of goal achievement and failure, what is probably the most that can be expected and what is likely to be the least? How can these possibilities be presented in the early stages, so as to encourage real effort and commitment, worthy of being treated as real success, without slipping into exaggerated expectations?*[90]

It should be clear at this stage what our paper argues: the main issue is not whether or not the 2020 targets will be achieved, but whether they will generate enough momentum towards the four "pragmatic objectives" to make progress on the stated targets. We suggest that this depends mainly on how the targets can be used to allocate responsibility, and we can now rejoin Easterly in asserting that "the next effort should get the 'who/why/what' clear"[91] within the 2020 targets framework. The "strategic targets" we identified are a call to such action. Interestingly, the French Ministry of Ecology very recently created a commission with the mandate to identify so-called harmful subsidies.

---

[90] R. Jolly, *op. cit.*
[91] W. Easterly, *op. cit*.

MAKING THE VAIN WISH A SIGNIFICANT OPPORTUNITY FOR GLOBAL BIODIVERSITY GOVERNANCE

Given the various implicit virtues and objectives assigned to global biodiversity targets, and their ambiguous nature, they can rightfully be considered simultaneously to be vain wishes, utopian, feel-good schemes, real objectives, true commitments and even significant opportunities. What seems to be clear is that the implicit objective is not mainly to achieve the explicit one, but rather to surf on its appeal to make a few steps in the desired direction. Acknowledging it probably helps explain why the international community embarked on the 2020 adventure before drawing a thorough, critical and strategic assessment of the 2010 experiment. But it also raises several questions, not least as to how to communicate about the objectives and their attainment or failure. It makes global objectives a dangerous instrument, and suggests that shedding light on an overall, flagship objective (like in the 2010 case) may not be a good idea. Concentrating on a wide range of twenty targets so that at least part of the effort may be successful (assuming at least some targets will be met, which is not a given) might prove a better way to present the issue to the public.

On the whole, this paper shows that making global biodiversity targets significant opportunities for conservation is a challenge. It illustrates the difficulty of articulating international environmental governance and (technical) public action. There are serious conditions which must be met for such targets to be really useful, not least because those who set them and push for their adoption are generally not those who can act in order for the targets to be reached, while those who could act tend not to want to. Targets are most helpful when they allow for the assigning of responsibilities for action and accountability for successes and failures, and this is much easier to do on objectives dealing with policies and instruments than on those dealing with the state of biodiversity. Each party to the CBD can be held responsible for the decision it makes, but not for the results. Along this line, Nagoya's strategic plan contains agreements about the types of decisions to be made – although they have yet to be made.

Who can/must do what? Who is to blame for what? Biodiversity erosion has to be extirpated from a world of impunity and anonymous processes if the conservation community is to finally start reaching some of its objectives at the desired scale and in the desired timeframe. Emphasis shall therefore now be placed on the allocation of responsibilities, and stakeholders should use it to push the "paralysing actors" to start moving in the desired direction. We still believe that the 2020 targets could have been framed in a much more strategic and consistent way had sufficient analysis of the 2010 experience been undertaken. Luckily, the glass is half-full: the 2020 Strategic Plan does offer significant opportunities. We gave the examples of the negotiations of

the new European Common Fisheries and Agricultural Policies, but many more opportunities will arise throughout the next ten years, at all scales and on all continents. It is up to the conservation community to seize them.

ACKNOWLEDGEMENTS

The authors wish to thank Emma Broughton, François Pacquement and IDDRI colleagues for stimulating discussions and inputs around earlier versions of this paper.

BIBLIOGRAPHY

A. Amar, and L. Berthier, *Le Nouveau Management Public: avantages et limites*, Revue du Réseau d'enseignants, chercheurs et experts en management public, December 2007.

A. Balmford, L. Bennun, B. ten Brink, D. Cooper, I.M. Côté, P. Crane, A. Dobson, N. Dudley, I. Dutton, R.E. Green, R.D. Gregory, J. Harrison, E.T. Kennedy, C. Kremen, N. Leader-Williams, T.E. Lovejoy, G. Mace, R. May, P. Mayaux, P. Morling, J. Phillips, K. Redford, T.H. Ricketts, J.P. Rodríguez, M. Sanjayan, P.J. Schei, A.S. van Jaarsveld, B.A. Walther, "The Convention on Biological Diversity's 2010 target," *Science*, Policy Forum, vol. 307, 2005, pp. 212-213.

A. Balmford, P. Crane, A. Dobson, R.E. Green, G.M. Mace, "The 2010 challenge: data availability, information needs and extraterrestrial insights," *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 221-228.

P. Bezes, "Le renouveau du contrôle des bureaucraties. L'impact du New Public Management," *Informations sociales,* vol. 126, 2005, pp. 26-37.

R. Billé, "Action without change? On the use and usefulness of pilot experiments in environmental management," *Surveys and Perspectives Integrating Environment and Society (Sapiens)*, vol. 3, n° 1, 2010, pp. 1-6.

P. Blandin, *Biodiversité. L'avenir du vivant*, Paris, Albin Michel, 2010.

S.H.M. Butchart, A.J. Stattersfield, J. Baillie, L.A. Bennun, S.N. Stuart, H.R. Akçakaya, C. Hilton-Taylor, and G.M. Mace, "Using Red List Indices to measure progress towards the 2010 target and beyond," *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 255-268.

2010 Calls for New Biodiversity Targets, Trondheim Conference on Biodiversity 2010, Trondheim, Norway February 1-5, 2010, <http://www.trondheimconference.org/>

J.L. Combes, R. Pirard, and P. Combes Motel, "A methodology to estimate impacts of domestic policies on deforestation: Compensated Successful Efforts for 'Avoided Deforestation' ," *Ecological Economics*, vol. 68, 2009, pp. 680-91.

Communication de la Commission au Conseil, au Parlement Européen, au Comité Economique et Social Européen et au Comité des Régions, *Evaluation à Mi-parcours*

de la Mise en Œuvre du Plan d'Action Communautaire en Faveur de la Diversité Biologique, COM (2008) 864, Bruxelles, 16 Décembre 2008, <http://ec.europa.eu/environment/nature/biodiversity/comm2006/pdf/bap_2008_fr.pdf>

Conference of the Parties to the Convention on Biological Diversity, Framework for Monitoring Implementation of the Achievements of the 2010 Target and Integration of Targets Into the Thematic Programmes of Work, 8th Conference of the Parties, Decision VIII/15, 20-31 March 2006, <http://www.cbd.int/decision/cop/?id=11029>

Conference of the Parties to the Convention on Biological Diversity, Report of the Open-ended Inter-sessional Meeting on the Strategic Plan, National Reports and Implementation of the Convention on Biological Diversity, Annex to recommendation 1 of Document UNEP/CBD/COP6/5, 6th Conference of the Parties, 7-19 April 2002, <http://www.cbd.int/doc/meetings/cop/cop-06/official/cop-06-05-en.pdf>.

Conference of the Parties to the Convention on Biological Diversity, *Strategic Plan for the Convention on Biological Diversity*, 6th Conference of the Parties, Decision VI/26, 7-19 April 2002, <http://www.cbd.int/decision/cop/?id=7200>.

Conference of the Parties to the Convention on Biological Diversity, *Strategic Plan: Future Evaluation of Progress*, 7th Conference of the Parties, Decision VII/30, 9-10 February 2004, <http://www.cbd.int/decision/cop/?id=7767>.

Conference of the Parties to the Convention on Biological Diversity, *Updating and Revision of the Strategic Plan for the Post-2010 Period*, Decision as adopted (advance unedited text), 10th Conference of the Parties, Nagoya, Japan, 2 November 2010, <http://www.cbd.int/nagoya/outcomes/>

Convention on Biological Diversity, *High-Level Working Group on the Future of Global Targets for Biodiversity*, 9-10 March 2009, Bonn, <http://www.cbd.int/doc/meetings/ind/emind-02/official/emind-02-09-rev1-en.pdf>, accessed on 15 September 2010.

Convention on Biological Diversity, *Meeting Documents, Informal Expert Workshop on the updating of the Strategic Plan of the Convention for the post-2010 period*, London, United Kingdom, 18-20 January 2010, <http://www.cbd.int/doc/?meeting=EM-StratPlan-01>.

Convention on Biological Diversity Subsidiary Body on Scientific, Technical and Technological Advice, Examination of the Outcome-oriented Goals and Targets (and Associated Indicators) and Consideration of their Possible Adjustement for the Period Beyond 2010, Fourteenth Meeting, Nairobi, 10-21 May 2009, <http://www.cbd.int/doc/meetings/sbstta/sbstta-14/official/sbstta-14-10-en.pdf>.

Convention on Biological Diversity, *2010 Biodiversity Target, Goals and Sub-targets*, <http://www.cbd.int/2010-target/goals-targets.shtml>.

Convention on Biological Diversity, *2010 Biodiversity Target, Why Set a Target?*, last updated on 1st June 2007, <http://www.cbd.int/2010-target/background.shtml>.

The Council of the Pan-European Biological and Landscape Strategy through the Ad Hoc Working Group of Senior Officials, *Kyiv Resolution on Biodiversity*, Fifth Ministerial Conference, Environment for Europe, Kiev, 21-23 May 2003, <http://www.unep.ch/roe/documents/biodiv/kiev_conference/documents/biodiv_resolution_e.pdf>.

S. Devarajan, M.J. Miller, and E.V. Swanson, *Goals for development. History, prospects and costs*, The World Bank, Policy Research Paper 2819, 2002.

A. Dobson, "Monitoring global rates of biodiversity change: challenges that arise in meeting the Convention on Biological Diversity (CBD) 2010 goals," *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 229–241.

P. Drucker, *The practice of management*, Harper Business, 1954.

W. Easterly, Aid Watch, *Set a Big Goal. Give All to Meet It. This is Stupid*. October 2nd, 2009, <http://aidwatchers.com/2009/10/set-a-big-goal-give-all-to-meet-it-this-is-stupid/>, last accessed on 30 July 2010.

W. Easterly, "It's over: The tragedy of the Millennium Development Goals," *The Huffington Post*, 6th of July 2009.

European Council, Conclusions of the 2235th Council meeting environment, 6th Environment Action Programme, 7 June 2001.

European Environment Agency, *Progress Towards the European 2010 Biodiversity Target*, EEA Report n°4/2009, Copenhagen, 22 May 2009, <http://www.eea.europa.eu/publications/progress-towards-the-european-2010-biodiversity-target.>

FAO, *Global Forest Resources Assessment 2010, Key Findings*, <http://foris.fao.org/static/data/fra2010/KeyFindings-en.pdf>, last accessed on 15 September 2010.

M. Fisher, "2010 and all that – Looking forward to biodiversity conservation in 2011 and beyond," *Oryx*, vol. 43, n° 4, 2009, pp. 449–450.

G8 Leaders, "Declaration on Responsible leadership for a sustainable future," G8 Summit, L'Aquila, Italy, 8-10 July 2009, http://www.g8italia2009.it/static/G8_Allegato/G8_Declaration_08_07_09_final,0.pdf

The Hague Ministerial Declaration of the Conference of the Parties to the Convention on Biological Diversity, 26 April 2002, http://www.cbd.int/doc/meetings/cop/cop-06/other/cop-06-min-decl-en.pdf

M. de Heer, V. Kapos, and B.J.E ten Brink, "Biodiversity trends in Europe: development and testing of a species trend indicator for evaluating progress towards the 2010 target," *Phil. Trans. R. Soc. B*, vol. 360, 2005, pp. 297-308.

D. Herman, "Foreign Aid Must Focus on Smaller Goals – WEF," *IOL News*, June 2nd, 2006.

R. Jolly, *Global goals – The UN experience*, Human Development Report Office, Background paper for HDR, UNDP, 2003.

Kobe Declaration, 24-27 October 2004, Kobe, Japan, <http://www.worldsocialpsychiatry.org/PDF/WASP_Kobe_Declaration_10_31_04.pdf>

P. Leadley, H.M. Pereira, R. Alkemade, J.F. Fernandez-Manjarres, V. Proenca, J.P.W. Scharlemann, and M.J. Walpole, "Biodiversity Scenarios: Projections of 21st century change in biodiversity and associated ecosystem services. Secretariat of the Convention on Biological Diversity, Montreal," *Technical Series*, vol. 50.

G.M. Mace, "An index of intactness," *Nature*, vol. 434, 2005, pp. 32-33.

G.M. Mace, and J.E.M. Baillie, "The 2010 biodiversity indicators: Challenges for science and policy," *Conservation Biology*, vol. 21, n° 6, 2007, pp. 1406-1413.

G.M. Mace, W. Cramer, S. Díaz, D.P. Faith, A. Larigauderie, P. Le Prestre, M. Palmer, C. Perrings, R.J. Scholes, M. Walpole, B.A. Walther, J.E.M. Watson, and H.A. Mooney, "Biodiversity targets after 2010," *Current Opinion in Environmental Sustainability*, n° 2, 2010, pp. 3-8.

J. Mullins, and R. Komisar, *Getting to plan B: Breaking Through to a Better Business Model*, Harvard Business Press Book, 2009.

J.-D. Naudet, Les OMD et l'aide de cinquième génération. Analyse de l'évolution des fondements éthiques de l'aide au développement. Document de travail, Agence Française de Développement, n° 2, mai 2005.

F. Pacquement, "Bâtir des politiques globales: l'aide au développement, source d'inspiration?," *Afrique contemporaine*, vol. 3, n° 231, 2009, pp. 265-282.

Plan of Implementation of the World Summit on Sustainable Development, Johannesburg Summit 26 August - 4 September 2002, pp. 26, <http://www.cbd.int/doc/meetings/cop/cop-06/other/cop-06-min-decl-en.pdf>

Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat, *World Population Prospects: The 2008 Revision*, <http://esa.un.org/unpp>, last accessed on Wednesday, September 15, 2010.

Presidency Conclusions of the EU Summit in Gothenburg, 14-15 June 2001.

Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 2*, Montreal, Canada, 2006.

Secretariat of the Convention on Biological Diversity, *Global Biodiversity Outlook 3*, Montreal, Canada, 2010.

W.J. Sutherland, W.M. Adams, R.B. Aronson, R. Aveling, T.M. Blackburn, S. Broad, G. Ceballos, I.M. Côté, R.M. Cowling, G.A.B. Da Fonseca, E. Dinerstein, P. J. Ferraro, E. Fleishman, C. Gascon, M. Hunter Jr., J. Hutton, P. Kareiva, A. Kuria, D.W. MacDonald, K. MacKinnon, F.J. Madgwick, M.B. Mascia, J. McNeely, E.J. Milner-Gulland, S. Moon, C.J. Morley, S. Nelson, D. Osborn, M. Pai, E.C.M. Parsons, L.S. Peck, H. Possingham, S.V. Prior, A.S. Pullin, M.R.W. Rands, J. Ranganathan, K.H. Redford, J.P. Rodriguez, F. Seymour, J. Sobel, N.S. Sodhi, A. Stott, K. Vance-Borland, and A. R. Watkinson, "One Hundred Questions of Importance to the Conservation of Global Biological Diversity," *Conservation Biology*, vol. 23, n° 3, 2009, pp. 557–567.

The Economics of Ecosystems and Biodiversity (TEEB), <www.teebweb.org>.

UNESCO IYB, *Biodiversity Science-Policy Conference*, UNESCO Headquarters, Paris, 25-29 January 2010, <http://portal.unesco.org/science/en/ev.phpURL_ID=8090&URL_DO=DO_TOPIC&URL_SECTION=201.html>

UN Millenium Development Goals, *Target 7: Ensure Environemental Sustainability*, <http://www.un.org/millenniumgoals/environ.shtml>, last accessed on 30 July 2010.

M. Walpole, R.E.A. Almond, C. Besançon, S.H.M Butchart, D. Campbell-Lendrum, G.M. Carr, B. Collen, L. Collette, N.C. Davidson, E. Dulloo, A.M. Fazel, J.N. Galloway, M. Gill, T. Goverse, M. Hockings, D.J. Leaman, D.H.W. Morgan, C. Revenga, C.J. Rickwood, F. Schutyser, S. Simons, A.J. Stattersfield, T.D. Tyrrell, J.-C. Vié, and M. Zimsky, "Tracking Progress Toward the 2010 Biodiversity Target and Beyond," *Science*, vol. 235, n° 5947, 2009, pp. 1503-1504.

M. Walpole, and P. Herkenrath, "Measuring progress towards the 2010 target and beyond: an international expert workshop on biodiversity indicators," *Oryx*, vol. 43, n° 4, 2009, pp. 461.

SHOULD WE BE DISAPPOINTED BY THE YEAR OF BIODIVERSITY?

Raphaël Billé,[1] Gilles Kleitz,[2] Lucien Chabason[3] et Claudio Chiarolla[4]

The international year of biodiversity immediately seems paradoxical: a year of celebration and recognition, but also a reaffirmation of a decidedly dire fate due to the acknowledgement that objectives for 2010 have not been reached.[5] This paradox reflects the situation on the ground: biologic indicators in the red[6] and the a "sixth major extinction"[7] is announced by some, while at the same time actions in favour of biodiversity mobilise ever growing resources, reinforce scientific capacities, and galvanize undeniable creativity. This accumulated effort does not make up for the effects of the constant increase of global pressure on the biosphere, and the fact that the dominant models of development have still not shown tangible proof that they can improve their ecological performance in any way but on the margins. The 2010 assessment therefore calls society into question, not only on the level of its efficiency and the intensity of its actions in favour of biodiversity, but also more generally, on its

[1] Director of the Biodiversity and Adaptation Programme, Institute for Sustainable Development and International Relations (IDDRI), Sciences Po, 27 rue Saint Guillaume, 75337 Paris, France.
[2] Biodiversity Project Manager, French Development Agency (AFD), 5 rue Roland Barthes, 75598 Paris, France.
[3] Direction Advisor, Institute for Sustainable Development and International Relations (IDDRI), Sciences Po, 27 rue Saint Guillaume, 75337 Paris, France.
[4] Research Fellow, Institute for Sustainable Development and International Relations (IDDRI), Sciences Po, 27 rue Saint Guillaume, 75337 Paris, France.
[5] In 2002, the member states of the CBD pledged to "assure, starting in 2010, a significant reduction in the current rhythm of loss of biological diversity on the global, regional, and national levels."
[6] Cf. Butchart, S. H. M. & al, Indicators of recent biodiversity decline, *Science*, vol. 29, April 2010; <www.scienceexpress.org>. See also the Global Biodiversity Outlook (www.cbd.org)
[7] According to biologists this sixth extinction of biological diversity caused over an extremely short period of time by man, will follow the past five extinctions which were due to diverse geochemical and climatic events over much longer geological periods.

capacity to contain environmental nuisances induced by development and to manage the future of its biological capital.

2010 : A PARADOXICAL YEAR

INCREASED AND RENEWED EFFORTS AT ALL LEVELS?

An assessment of the efforts undertaken for the conservation of biodiversity during the last decade shows remarkable results. One can, for example, highlight the important increase of protected reserves between 2000 and 2010, currently containing more than 13.5% of emerged land or the equivalent of the South America. The speed of conversion of the Amazon rainforest, on the order of 8 million hectares per year throughout the past decade, was notably slowed by 2009. Numerous species and extraordinary habitats all over the world are now sustainably protected. The biological state of certain territories is improving, including cities in developed countries and waterways in the European Union.

In terms of governance, 2010 has also been a year of intense activity: numerous events linked to the international year of biodiversity, significant advances on the IPBES, a general assembly of the United Nations special session dedicated to the topic of biodiversity, and finally, the Conference of the Parties (COP) to the Convention on Biological Diversity in Nagoya (Japan). In addition to the technical advances on a number of crucial topics such as the reinforced interaction with the climate convention through the REDD mechanism, ocean acidification, mitigation and adaptation, the Nagoya conference achieved global success despite the uncertainties that remain in the background and the decisions yet to be made – and negotiated – in a forthcoming future.

COP10 at Nagoya

Firstly, a balanced “protocol on access to genetic resources and the fair and equitable sharing of benefits arising from their utilization” was adopted. In negotiation since the World Summit on Sustainable Development in Johannesburg in 2002, the ABS protocol, a key text of the negotiation between “Northern” and “Southern” countries in Nagoya, is designed to put an end to the pillage of genetic resources (biopiracy). This

new protocol will be open for signing starting in February 2011 and could enter into force three months after ratification by the fiftieth state.

The ABS protocol proposes an international framework through which the earnings derived from the use of genetic resources will be shared with the countries of origin, on the basis of a preliminary consent and of the signing of a contract with the concerned state. Once entered into force, this protocol could engender significant financial flows contributing to a better global distribution of the benefits derived from conservation. Seeing how badly the negotiations began, this protocol is a good compromise, though a number of controversial subjects have been taken out of the text or defined in sufficiently general terms so as to attain consensus. Certain crucial points have therefore remained vague, such as the potential for the protocol's application on issues concerning, notably, "products derived from genetic resources" or the relationship with other international instruments dealing with exchanges of genetic material and the sharing of advantages, such as the coming regulations on pathogens of the World Health Organization.

Generally speaking, the negotiations have often led to agreements on principle rather than on real operational rules. The future member states to this protocol will need to continue negotiations in order to more precisely define certain operational mechanisms, as the protocol leaves significant room for interpretation – sometimes generating divergent perspectives – of key obligations. National-level legislation that will be in charge of defining the range and scope of their application will therefore play a crucial role in the contribution the protocol will make to international equity and the global governance of biodiversity.

The conference has also approved a new 10 year strategic plan containing 20 relatively precise objectives focused on slowing the erosion of biodiversity (*see Raphaël Billé, "Global biodiversity targets: Vain wishes or …", this volume)*. With few legal obligations, and proposing above all to guide national and international efforts for the protection of biodiversity, this plan nonetheless seems to be one good surprise coming out of Nagoya. In truth, for the first time, it clearly states the strategy of the CBD, which seeks to influence sectors of activity with the highest impacts on biodiversity, with objectives related to the problems of biodiversity erosion and the pressure being put on the ecosystem. It proposes, for example, the elimination of subsidies that are harmful to biodiversity.

Here again, due to international compromises, a number of objectives have seen their scopes reduced or are vague to the point of permitting wide interpretations. A good example of this phenomenon is the uncertainty surrounding the actual impact of the aforementioned objective on the subsidies paid to the fishing sector, notably in Europe, which are largely responsible for the overfishing of many species.

Be that as it may, in two years from now, the member states of the CBD will have to implement this plan within their national strategies and biodiversity action plans.

Finally, a partial agreement was reached on the question of North-South financing, the third pillar of the negotiation package, accompanied by quantitative engagements on the parts of several developed countries as to the portion of their development help that will be allocated to biodiversity. The total sum of the global engagement, and the terms of the financial mechanisms, should be specified by the next COP of the CBD (COP 11) in New Delhi in 2012.

However, and as usual during these types of large conferences, the financing agreement is weak since there are no clear or reliable estimations of the amount of funding necessary, nor is it possible to reliably estimate the budgets currently available for the protection of biodiversity. Furthermore, public development aid engagements are generally not respected, and if funds are disbursed, they are generally subject to accounting gymnastics in order to be "greened."

The COP in Nagoya is a global success that will maintain or perhaps even enhance the dynamic within the CBD, but for which concrete effects will be, more than ever, submitted to the good will of states and political prompting, which may or may not favour the implementation of the "Nagoya deal" in the coming years.

STRONG TENDENCIES, OF WHICH REVERSAL IS NOT ONE

Despite the significant progress observed at multiple levels, the indicators compiled by the Convention on Biological Diversity strongly indicate a strengthening of the primary causes of the erosion of biodiversity, of direct pressures and the continuation and even the acceleration of the rate of biodiversity degradation, in a context where 60% of the services provided by ecosystems are already in decline. Of the entire population of vertebrates, 30% are currently threatened, with the most pressure being put on animals used in traditional pharmacopeias: amphibians (-42% since 1968), wild birds (-40%) and certain types of large mammals such as tigers in Asia. In Asia, in the Pacific, and in Africa, the risk of extinction of medicinal plants has passed 30%. Overexploitation of halieutic resources has put some 80% of fish species in danger and aquatic ecosystems remain among the most threatened. Finally, even if the phenomenon has now slowed, the FAO estimates that a fifth of the world's mangroves have disappeared between 1980 and 2005.

CAUSES KNOWN BUT RARELY MADE EXPLICIT

The principle causes of failure in 2010 may seem clearly established: sectoral activities – agriculture, fishing, forest and mine exploitation, infrastructure and urban development – and demographic growth have not reduced the consumption of biological resources, either in absolute value or per capita. However, the web of causes is much more complex and varied: gaps in the scientific knowledge on biodiversity, the weakness of the science-decision-making interfaces and of the implementation of regulations, lack of political will, absence of economic incentives, insufficient implication of civil society, and a shortage of financing... All this is true and inextricable. But let us go into more detail on a few prominent points.

Within the context of the financial turned economic crisis, which has tended to slacken political actions to protect the environment, the “greening” of those activities that put the most pressure on the biosphere remains very heterogeneous on a global level. Nuisances do not disappear but are rather displaced, following the relocation of activities and biological raw material supply chains that are increasingly globalised. Environmental norms (impact studies, compensations, waste, verification of the legal origin of primary materials, limitation of the use of environmental space, obligations to use resources sustainably, etc.) are still unevenly developed throughout the world, and progress is slow and laborious, in particular on regional and international levels.

Moreover, the principle of compensating damages caused to biodiversity that are considered “inevitable,” which is supposed to ensure the compatibility between development and biodiversity protection, has only been partially applied and has not shown proof of its capacity to achieve its “no net loss” goal. In most cases, the building of ecological networks to preserve ecosystems and their continuity remains in its preliminary stages, while urban sprawl continues in full swing in emerging and industrialised countries. In developing countries with large biological resources, sustainable management is highly technical and requires statutory controls, as well as a respect and preservation of local activities and customs, which can only be developed over time. Taxation on the exploitation of forests and halieutic resources does not suffice to fund the management of their use. More generally, economic analysis available to national leaders tends to remain silent on the consequences and long-term costs of the degradation of ecological capital. Ecologists and economists still have difficulties in operationally tying together the objectives of capital and employment growth, and of ecosystem maintenance and spatial planning. The return on and the maintenance of natural capital within the framework of a profitable and sustainable economic activity remains an exception in practice. If the conservation

community has long ago understood the need to consolidate its achievements, notably in protected areas, and to “go out of its reserves,” it struggles to initiate and stimulate the needed “greening” of human activities.

BUILDING THE FUTURE

The principal conclusion to draw from this assessment of the international year of biodiversity therefore seems to be that the increase in the funds allocated to conservation only has a peripheral impact on the general state of biodiversity and its future. This calls for a number of remarks.

First of all, in 2010, national and international institutions had to question themselves on their capacity to invent and implement mechanisms which would be capable of pulling us out of ecological impasses: if a few Chinese municipalities tried to straighten out local ecological collapses, implementing national environmental regulations in a situation of double digit growth is a challenge.

During the past decade in France, parliamentarians have impeded the implementation of ecologic principles proposed by some members of civil society, the scientific community, and the ministry of Ecology. Assembly of non-humans, Council of the future, participatory democracy, conditions for the dialogue between ecological sciences and politicians: this decade will have illuminated the difficulties that collectivities have had to integrate the ecological reality, and to propose new paths in democratic and governance terms.

The conference in Nagoya has proven that the multilateral environmental system within the United Nations still functions: it remains an appropriate space for global regulation, where each member feels legitimate, responsible, and heard. Nevertheless, the foundations laid at Nagoya will not, in their current state, reverse the global tendencies towards the erosion of biodiversity, which is to say that they will not have a serious influence on the principle causes of destruction: land conversion, overexploitation, pollution, climate change, etc. This conference will have advanced a few very technical subjects, the main elements remaining to be negotiated not only within the CBD but also within other arenas, at different levels of governance. Important examples of this include the agricultural and fishing reforms currently being developed in Europe.

The established emergence of “new” actors – scientists, experts, members of civil society, and firms – must continue. At the crossroad of ecology and industry, ecology and finance, ecology and employment, ecology and culture, and ecology and cities, one can find operational solutions integrating an ecological rationality within the

economic and social frameworks, and the political programmes of institutions. It is at these crossing points that new alternatives for human development, less harmful to the biosphere, are born. Innovative alliances and new governance structures have to be explored in order to manage the stark oppositions born out of competing short-term interests, and to defeat resistance to change. On a global level, the least advanced countries must have the means to practice ecological responsibility, while inter-institutional dialogue between European and emerging countries on environmental regulation needs to intensify and do more to directly implicate ecological, economic, and social actors. It seems a useful endeavour to further develop the means to evaluate the state of the biosphere on a global level, such as, for example, remote detection and the sharing of results within networks like the IPBES. The emergence of robust econometrics of ecological capital and biological resources must contribute, with other types of knowledge, to the establishment of ecological principles of efficiency and the taking into account of the long- and very long-terms.

In the current situation, the reinforcement of local nature protection policies, necessary as they may seem, tend to be easy remedies that are politically accessible and relatively painless in comparison to the more profound turnarounds necessary to address and change the trajectories of development. During the past few years, public policies have tended to engage in contradictory efforts, the goals and means of which are incompatible, but for which the political cost of actual arbitration would be much too high. The reconciliation of these contradictions is therefore left up to lower levels to be implemented, or pushed into the future. The reinforcement of biodiversity conservation efforts, associated with a heavy silence as for the profound causes of failure in 2010, and above all, the unwavering promotion (or even subsidising) of economic activities with disastrous consequences on biodiversity, is an archetype. This increases the necessity, though it may be difficult, of assigning responsibility for the current state of failure: actors for whom the goal is conservation have a low impact (and therefore low levels of responsibility) on the future of biodiversity; whereas actors with large impacts are not held responsible for it, as their legitimate goals are elsewhere.

The year 2010 will undoubtedly have reiterated the urgency of the need to reduce the unbearable pressures that humanity exerts on the biosphere. It will also have shown that our collective ability to reduce the ecological weight of our societies, even if some tangible perspectives exist, is extremely constrained.