The articles in the present Review are based on lectures given during the third University of Joensuu – UNEP Course on International Environmental Law-making and Diplomacy, which was held from 26 June to 7 July 2006 at the University of KwaZulu-Natal, Pietermartizburg campus, South Africa. The special theme of the course was biodiversity. The aim of the Course was to convey key tools and experiences in the area of international environmental law-making to present and future negotiators of multilateral environmental agreements. In addition, the Course served as a forum for fostering North-South co-operation and for taking stock of recent developments in the negotiation and implementation of multilateral environmental agreements and diplomatic practices in the field.

The lectures were delivered by experienced hands-on diplomats, government officials and members of academia. The Course is an annual event designed for experienced government officials engaged in international environmental negotiations. In addition, other stakeholders such as representatives of non-governmental organizations and the private sector may apply and be selected to attend the Course. Researchers and academics in the field are also eligible.

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Ed Couzens and Tuula Kolari (editors)

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Foreword

The articles in the present *Review* are based on lectures given during the third University of Joensuu – UNEP Course on International Environmental Law-making and Diplomacy, which was held from 26 June to 7 July 2006 at the University of KwaZulu-Natal, in Pietermaritzburg, South Africa. The first two Courses were arranged in Joensuu in 2004 and 2005. The proceedings of those courses have been published in the 2004 and 2005 *Reviews*.[1]

The aim of the Course was to convey key tools and experiences in the area of international environmental law-making to present and future negotiators of multilateral environmental agreements. In addition, the Course served as a forum for fostering North-South co-operation and for taking stock of recent developments in the negotiation and implementation of multilateral environmental agreements and diplomatic practices in the field.

The Course is an annual event designed for experienced government officials engaged in international environmental negotiations. In addition, other stakeholders such as representatives of non-governmental organizations and the private sector may apply and be selected to attend the Course. Researchers and academics in the field are also eligible. Altogether 32 participants from 27 countries, with an equal distribution from the North and South, as well as between genders, participated in the third Course.

We would like to express our gratitude to all of those who contributed to the successful outcome of the third Course. It gives us great pleasure to recognize that the lectures and presentations given during the Course are now recorded in this *Review*. We are grateful that the authors were willing to take on an extra burden after the Course and transfer their presentations into article form thereby making the Review such a useful resource. In addition, we would like to thank Ed Couzens and Tuula Kolari for skilful editing of the *Review* and the Editorial Board for providing guidance in the editing process.

Professor Perttu Vartiainen
Rector of the University of Joensuu

Achim Steiner
UNEP Executive Director
Under-Secretary-General of the United Nations

[1] For electronic versions of the 2004 and 2005 Reviews please see the University of Joensuu – UNEP Course on International Law-making and Diplomacy website, <http://www.joensuu.fi/unep/envlaw>.

Preface

The current *Review* seeks to provide practical guidance, professional perspective and historical background to practitioners, stakeholders and researchers working in the area of international environmental law-making and diplomacy. The *Review* highlights dominating doctrines, approaches and techniques in the field, including international environmental governance, sustainable development, international environmental law-making, environmental education and empowerment, and compliance. Moreover, the third volume focuses on biodiversity as a special theme. The first and second Courses were hosted by the University of Joensuu, in Joensuu, Finland – an area in which forestry and water provide dominant images. The special themes of the first two Courses were, appropriately, 'water' and 'forestry.' The third Course was hosted by the University of KwaZulu-Natal, on its Pietermaritzburg campus in KwaZulu-Natal, South Africa. KwaZulu-Natal is an extremely biodiversity-rich area, both in natural and cultural terms, and the special theme chosen was therefore 'biodiversity.'

The lectures of the third University of Joensuu – UNEP Course on International Environmental Law-making and Diplomacy, from which the articles in the present Review emanate, were delivered by experienced hands-on diplomats, government officials and members of academia.[2] One of the main purposes of the Course was to take advantage of the practical experiences of experts working in the field of international environmental law-making and diplomacy. Consequently, the articles in this *Review* and the different approaches taken by the authors reflect the diverse professional backgrounds of the lecturers and resource persons. As in the previous two editions, the editorial board of the *Review* also wished to give the opportunity for, and to encourage, participants to the Course to submit papers. Two such papers are published in this year's *Review*. Overall, the articles in the *Review* represent various aspects of the broad and complex field of international environmental law-making and diplomacy.

Tuula Kolari and Ed Couzens edited the *Review*, advising on and, where necessary, amending the style and content of the submissions. They also provided research assistance by checking, adding and editing references and footnotes. All Internet references were valid as of 31 May 2007. The editors would like to thank Marko Berglund, who was the editor for the 2004 and 2005 *Reviews*, for his assistance.

The present *Review* is divided into three sections. Part I addresses general issues relating to international environmental law-making and governance. Donald Kaniaru provides an insightful account of experiences on Group 77 coordination and negotiation blocs in the creation of international environmental agreements, with advice

[2] Information on the University of Joensuu – UNEP Course on International Environmental Law-making and Diplomacy is available at <http://www.joensuu.fi/unep/envlaw>.

given especially to new negotiators. The importance of approaching negotiations with an informed sense of history cannot be understated. Nicola Notaro's article addresses the complex role that the European Union plays in multilateral environmental negotiations. The EU is an important role-player, and also provides the most important current model for coordination of regional international environmental law. In providing an overview of compliance mechanisms under international environmental treaties, Tuomas Kuokkanen describes the design, characteristics and practice that prevail in international environmental law-making and regime-building to secure compliance of the parties. It is increasingly being recognized that the effectiveness of multilateral environmental agreements might depend upon the effectiveness of their compliance regimes.

Part II is dedicated to the special theme of the third University of Joensuu – UNEP Course: biodiversity; and considers both biodiversity problems and the nature of biodiversity-related negotiations. From a scientific perspective, Michelle Hamer presents an overview of the current biodiversity issues, looking at the concept of biodiversity itself and its various uses and impacts as well as the current threats to it and the way forward if it is properly to be protected. . From the perspective of having been closely involved with the negotiation process, Iwona Rummel-Bulska offers an account of the negotiation process leading to the adoption of the Convention on Biological Diversity (CBD) in 1992. An insightful and detailed insider's account of the negotiation process leading to the adoption in 2000 of the Cartagena Protocol on Biosafety, being a protocol to the CBD, is then offered by Tewolde Egziabher. Tewolde Egziabher gave the keynote address to open the third Course. On the subsequent operation of the Convention, Ahmed Djoghlaf looks at the important issue of national implementation of the CBD; with consideration of both opportunities and constraints on such implementation. In the same area, Elizabeth Maruma Mrema addresses the particular issue of establishing national policy frameworks for the implementation of the CBD; her paper being based on certain parties' national reports, and on a study conducted within UNEP.

Part III continues with the special theme – biodiversity – and contains papers that deal with the regulation in international law of particular biodiversity-related issues and specific problems. Loretta Feris examines the important question of the protection of biodiversity-related traditional knowledge. In so doing, she particularly considers the inadequacy of traditional legal patent protection mechanisms for protecting traditional knowledge. Course participant Larissa Schmidt then addresses the issue of access and benefit-sharing of biodiversity resources especially through the legal framework created in Brazil; and argues for the necessity of introducing a new and broad international regime to deal with the issue Moving to other biodiversity-related international instruments, course participant Kuphakwenkosi Gumede discusses the general threat that alien species transported in ballast water pose to biodiversity; the 2004 International Convention for the Control and Management of Ships' Ballast Water and Sediments; and the prospects for this Convention com-

ing into force. Minna Pyhälä concentrates on marine biodiversity conservation; and describes the work carried out under the Convention for the Protection of the Marine Environment of the Baltic Sea Area. Ed Couzens looks at a number of biodiversity-related international environmental agreements; and argues that the approach, both historical and current, of categorizing species for the protection of biodiversity in fact hinders both proper protection and understanding of biodiversity. Finally, Roger Porter provides a fascinating case study of current efforts to protected biodiversity in a World Heritage Site in South Africa. Of particular significance is the fact that the Site discussed is one of only 25 World Heritage Sites that have been inscribed by UNESCO's World Heritage Committee both for their natural and their cultural value; and that it is a Site which must be protected in a transfrontier context – some of the complexities of international negotiations around this protection are discussed.

Part IV of the *Review* reflects the interactive nature of the Course. During the Course two negotiation simulation exercises were organized to introduce the participants to the real-life challenges facing negotiators of international environmental agreements. Participants were given individual instructions and a hypothetical, sometimes country-specific negotiating mandate and were guided in the two simulation exercises. The first negotiation simulation dealt with access to genetic resources and benefit-sharing, and was directed by Brook Boyer from UNITAR. The second exercise was conducted by Cam Carruthers, and its focus was on the negotiation of the rules of procedure for the Compliance Committee of the Cartagena Protocol. Excerpts of the exercises are reprinted in this *Review*. In addition to the negotiation exercises, two more presentations on the Course had a significant participatory element. Marina von Weissenberg discussed the challenging question of the coordination of national positions in connection with biodiversity-related international instruments. Matti Nummelin provided the participants with an introduction to the structure and functions of the Global Environment Facility.

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Abbreviations

AALCC	Asian African Legal Consultative Committee
AALCO	Asian African Legal Consultative Organisation
ABS	Access and benefit-sharing
ACTO	Amazon Cooperation Treaty Organization
AfDB	African Development Bank
AU	African Union
BCS	Biodiversity country study
BPSP	Biodiversity Planning Support Programme
BSPA	Baltic Sea Protected Area
CBD	Convention on Biological Diversity
CCMALR	Convention on Conservation of Antarctic Marine Living Resources
CFSP	Common Foreign and Security Policy
CGIAR	Consultative Group on International Agricultural Research
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CMS	Convention on Migratory Species
COP	Conference of the Parties
EAEC	European Atomic Energy Community
EBRD	European Bank for Reconstruction and Development
EC	European Community
ECJ	European Court of Justice
ECOSOC	Economic and Social Council
ECSC	European Coal and Steel Community
EEC	European Economic Community
EEG	Eastern European Group
EEZ	Exclusive economic zone
EIA	Environmental impact assessment
EKZNW	Ezemvelo Kwazulu-Natal Wildlife
ETIS	Elephant Trade Information System
EU	European Union
FAO	Food and Agriculture Organization
GC	Governing Council
GEF	Global Environment Facility
GMO	Genetically modified organism
GRULAC	Latin American and Caribbean Group
HELCOM	Helsinki Commission
IBPGR	International Board for Plant Genetic Resources
ICCBD	Intergovernmental Committee on the Convention on Biological Diversity
ICWR	International Convention for the Regulation of Whaling

IDB	Inter-American Development Bank
IFAD	International Fund for Agricultural Development
IGO	Intergovernmental Organization
ILC	International Law Commission
IMCO	Inter-Governmental Maritime Consultative Organization
IMO	International Maritime Organization
IMP	Integrated Management Plan
INC	Intergovernmental Negotiating Committee
IP(R)	Intellectual property (rights)
IPCC	Intergovernmental Panel on Climate Change
ITPGRFA	International Treaty on Plant Genetic Resources for Food and Agriculture
IUCN	World Conservation Union
IWC	International Whaling Commission
KZN	KwaZulu-Natal
LDCs	Least Developed Countries
LMMC	Group of Like-minded Megadiverse Countries
LMO	Living modified organism
MARPOL	International Convention for the Prevention of Pollution from Ships
MAT	Mutually agreed terms
MDG	Millennium Development Goal
MEA	Millennium Ecosystem Assessment/multilateral environmental agreement
MOP	Meeting of the Parties
MPA	Marine protected area
NAM	Non-Aligned Group
NBSAP	National biodiversity strategy and action plan
NGO	Non-governmental organization
OAU	Organization of African Unity
OILPOL	International Convention for the Prevention of Pollution of the Sea by Oil
OJ	Official Journal
OSPAR	Convention for the Protection of the Marine Environment of the North-East Atlantic
PIC	Prior informed consent
POP	Persistent organic pollutant
REIO	Regional Economic Integration Organisation
SIDS	Small Island Developing States
SPAW	Specially Protected Areas and Wildlife
TOR	Terms of reference
TRAFFIC	Trade Records Analysis of Flora and Fauna in Commerce
TRIPS	(WTO Agreement on) Trade Related Intellectual Property Rights
UN	United Nations

UNCCD	United Nations Convention to Combat Desertification
UNCED	United Nations Conference on Environment and Development
UNCITRAL	United Nations Commission on International Trade Law
UNCLOS	United Nations Convention on the Law of the Sea
UNCOD	United Nations Conference on Desertification Control
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNGA	United Nations General Assembly
UNIDO	United Nations Industrial Development Organization
UNITAR	United Nations Institute for Training and Research
UPOV	International Union for the Protection of New Varieties of Plants Convention
WCMC	World Conservation Monitoring Centre
WCO	World Customs Organization
WEOG	Western European and Others Group
WHC	World Heritage Convention
WHO	World Health Organizaation
WIPO	World Intellectual Property Organization
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wildlife Fund

PART I

INTERNATIONAL ENVIRONMENTAL LAW-MAKING AND GOVERNANCE

International Environmental Negotiation Blocs

Donald Kaniaru[1]

1. Introduction

Firstly, it should be established what is meant by the phrase 'negotiating blocs'?[2] It is important to establish a common understanding of the broad blocs, bearing in mind that within each bloc, there may be smaller sub-groups with special interests that they may need to be appreciated, to be taken care of or protected in the broader regional bloc. Each region is indeed a bloc. However, a state can be barred out from the bloc on the basis of its political outlook. Indeed, being in a region geographically does not automatically include a state in the regional bloc for purposes of negotiations or other regional political considerations. For example, Israel is geographically in West Asia and Asia and the Pacific; but politically it is not in the sub-region or region. Equally Australia and New Zealand are not in Asia for purposes of some political groupings and interests; they are in the Western European and Others Group (WEOG). In the apartheid era, South Africa was not in the African region; after its changes of policy and elections in April 1994, it is a prominent member in the region and in the African Union.

As Egziabher has suggested, negotiation groups can be plagued with problems to cause new groupings to emerge.[3] Egziabher has also spoken of like-minded countries in the Biosafety negotiations of the Cartegena protocol.[4]

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[1] Advocate, Kaniaru & Kaniaru Advocates, Nairobi, Special Senior Legal Advisor to the Executive Director, UNEP; former Director, Division of Environmental Policy Implementation, UNEP and former diplomat with the Government of Kenya; email: wkaniaru@africaonline.co.ke. This paper is based largely on the author's experience on Group 77 coordination before joining the United Nations Environment Programme (UNEP); and on observations on negotiating blocs while the author served in UNEP. The paper is divided into two broad segments: firstly, the 1970s before the author joined UNEP; and, secondly, on the author's tenure at UNEP, which tenure ended in February 2003.

[2] By bloc is meant a group of countries or parties united by a common interest. *Oxford Advanced Learner's Dictionary* (Oxford University Press, 1998).

[3] See Tewolde Gebre Egziabher's article in this Review.

[4] Cartagena Protocol on Biosafety, Montreal, 29 January 2000, in force 11 September 2003, 39 *International Legal Materials* (2000) 1027, <http://www.biodiv.org/biosafety/default.aspx>.

The next matter which the present author wishes to offer clarification on is his experience before joining UNEP. The author joined UNEP in February 1975 and was in its Secretariat until February 2003. Before UNEP the author was in the diplomatic service of Kenya, posted to the Permanent Mission to the UN from 1970 where he was involved in negotiations of one kind or another within the UN family and conferences; the Organisation of African Unity (OAU), currently the African Union (AU); and the Asian African Legal Consultative Committee, (AALCC), presently the Asian African Legal Consultative Organisation (AALCO); amongst others.

In talking of negotiating blocs pre-1975 a different period, where the nature of the global problems was also quite different and difficult, is being referred to in this paper. In international law issues negotiated, or to be negotiated, and the interests of blocs keep changing; as do the players in the negotiations. National interests in one situation might be with a different set of players and in another situation with yet another different group of players.

In the lengthy period that the author was involved in the negotiations from the Secretariat, definite changes on the issues before the international community were observed. Some of those observations have a long history, which is still be relevant today; particularly for those who might join an international organization – whether UN or not – although the thrust may differ. Nevertheless, what is put forward in this paper is not all history.

2. Regional Blocs or Regions

2.1 Introduction

In referring to regional blocs and other major groups, what is being spoken of? From the perspective of the United Nations, there are five primary regional blocs. These are:

1. African Group.
2. Asian Group. This includes West Asia (Arab Group) and Asia and the Pacific. (Several sub-groups.)
3. Latin America and the Caribbean (Grulac).
4. Western European Group and Others (WEOG). This broad group hardly, if ever, negotiates as WEOG. In practice negotiations are by different players: the European Union; one nation across the Atlantic is, in fact a bloc on itself, and several other states regroup and champion common interests.
5. Eastern European Group (EEG).

Other blocs include:

i) NAM – the Non-Aligned Group. Before the collapse of the Soviet bloc, and its political socialist base, in 1990 global politics were set in two groups; the West, embracing the capitalist world, and the East, embracing the socialist world. A third force, grouping together states that wished to be in-between, and mainly comprised of developing countries, regrouped as non-aligned and looked at issues on the global scene on their merits rather than because they were "darling issues" from the West or the East. Several countries espoused a policy they called positive non-alignment. The political issues were the focus or priority for NAM; and its membership came from Africa, Asia and Latin America and the Caribbean. From Eastern Europe Yugoslavia was a founder member at the Bandung Conference[5] in the 1950s.

ii) The G - 77. Unlike the political issues that NAM dealt with, the economic and trade issues were spearheaded by the Group of 77; so called because at the time of its establishment in mid-June 1964 the group comprised only 77 developing states. The group emerged with the establishment of the United Nations Conference on Trade and Development (UNCTAD) in 1964. This Group has grown both in significance and in the scope of the issues it handles vis-à-vis the developed countries, and now stands at 135 countries, with the break-up of the Soviet bloc and other states. It embraces all African states, all Asian states, except Japan, Australia and New Zealand, all Latin American and Caribbean countries and a limited number of countries falling within the Eastern European group. By the time the present author left government service in 1975, the Group was about 100 strong.[6]

iii) There are other groups, like,the Small Island Developing States (SIDS) group; and the Least Developed Countries (LDCs) group, which have special interests that they articulate first, on their own, and later align or participate in different groups provided their interests are also taken on board.

Active negotiating groups are the five regional Groups and the G 77, which draws membership and support from the African, Asian, Latin American and Caribbean as well as from Eastern Europe. The NAM issues its policy position, which the developing regional groups can and do take up in negotiations with the developed group of countries at different *fora*. The five are also the basis of blocs seeking membership to various UN bodies, or members of the Bureau of such bodies as well as basis of Bureaux and committees of UN Conferences and operate at the different UN cen-

[5] This was a meeting of Asian and African states in Bandung, Indonesia, in April 1955. See, generally, <http://www.britannica.com/eb/article-9012143/Bandung-Conference>; and <http://www.aprnet.org/index.php?a=show&t=conferences&c=Research%20Conference%20on%20Bandung%20in%20the%2021st%20Century&i=1> (visited 30 May 2007), which site describes the Bandung Conference as 'the first and the most emotional and visionary conference of non-aligned countries' – the Conference discussed 'mutual interests and strategy in economic development and cultural cooperation' and led directly to the 1961 establishment of the Non-Aligned Movement.

[6] For the list of member states, see the recently released UNEP's *Manual on Compliance with and Enforcement of Multilateral Environmental Agreements* (2006), annex VIII at 709.

tres: New York, Geneva, Vienna and Nairobi as well as wherever UN conferences are held.

2.2 Observations about regional blocs and issues in the 1970s

In Africa, there were colonial vestiges in the 1970s. Politically, liberation of Africa was the priority number one. The African political organization that urged all states to support complete decolonization was the OAU and the then independent African countries. For decades, UN politics revolved around these issues. Africa had these issues to move in other groups, which were generally amenable save for one group, which was unenthusiastic. Communism, espoused by the Soviet bloc, and wishing to engage friends in Africa, was a competitive ideology, as was capitalism from the West. That is, the USA and former colonial masters. The Cold War was in place and influenced the politics of the day.

Asia, too, had its issues and difficulties. China (PR) had not assumed its seat in the UN until 1972. Before that it was Taiwan in the UN and its organs. This was a major issue and was taken as such by the majority of the developing countries in opposition to Taiwan and developed countries. The Asian Group and the G 77 were without China (as was also NAM). Asia had other issues. West Asia, grouping the Arabs, had its definite agenda on the Middle East issues following the establishment of Israel in 1948, the Wars in 1967 and 1973 and the Palestinian issues that persist to date. Within the Asian Group, the Arab group had and still has distinct interests all the way to the G 77 and NAM.

WEOG brought together the developed countries that did not belong or were not accepted into other groups. Thus, it embraced Western Europe, Canada and the USA, Australia, New Zealand and Japan; also Israel and South Africa of the day. This Group rarely, if ever, negotiates as a group; it rather operates in splinter groups of one or more states, the biggest grouping being the European Union (EU).

The Eastern European group covered that region; except for Yugoslavia, being a member in NAM and in G 77. This region is, or might be, greatly affected following several states joining the European Union, leaving fewer states in the EEG.[7] Within UNEP, membership of 58 states to the Governing Council (GC) is drawn from these regions with numbers defined.[8]

Issues of politics and the Cold War affected negotiations in substantive and technical issues in the United Nations; and one had to be abreast on all of these on the agenda of the UN Committees of the General Assembly, other UN bodies and

[7] However, the author is aware that the issue is under active consideration.

[8] 16 seats for African States,13 seats for Asian States, 6 seats for Eastern European States,10 seats for Latin American States and, 13 seats for Western European and other States. UNGA Res. 2997 (1972), part I paragraph 1.

specialized agencies. A diplomat, or secretariat official on assignment, joining the UN today would perhaps not fully appreciate how the pendulum swung on issues as a result of politics that seemed hardly relevant to issues at hand. For example, the then USSR bloc made their attendance at the 1972 Stockholm Conference conditional on the participation of the then German Democratic Republic (GDR). There is, therefore, a great difference between events and issues in the 1970s and those that persist today. However, the avenues, methodologies and similarities in approach that were perpetuated through regional blocs basically remain intact. With an increasing number of states (nearly 200) involved in negotiations, blocs are an irreplaceable means of defining areas of agreement and disagreement; interests involved and who the protagonists are.

3. Identification of critical issues of relevance to a region

Each bloc would draw from the agenda of the UN those issues of common interest and pursue these, along with other blocs, to a logical conclusion. For example, the African Group would review the UN General Assembly (UNGA) agenda, and determine issues of importance to Africa. The Asian and other Groups would do likewise. Those of interest to the three regions would be picked by the Group of 77. Before turning to G 77, Africa and Asia might first put their issues together. For example, in legal issues, these Groups were bound together in the Asian African Legal Consultative Committee (AALCC), now (AALCO), on issues parallel to the International Law Commission (ILC) and other UN bodies handling legal issues; for example the United Nations Commission on International Trade Law (UNCITRAL). Human Rights, Refugees, Oceans and, in particular the Law of the Sea (whose third Law of the Sea Conference negotiated the complex issues before it from the 1970s to 1982 when the Montego Bay Convention was adopted);[9] and, lately, environmental questions generally. The Law of the Sea negotiations were extremely complex and the process necessitated a multiplicity of interests, which included the land-locked countries, archipelagic states, and so forth.

Issues almost exclusively left to the G 77 are economic, social and trade issues. In the early 1970s these included primary achievements, notably the Declaration on the Establishment of a New International Economic order;[10] the Charter of Economic Rights and Duties of States (UNGA, 1974);[11] and the negotiations on UN strategy for the International Decade. Other issues touched on oceans; the Declaration on

[9] United Nations Convention on the Law of the Sea (UNCLOS), Montego Bay, 10 December 1982, in force 16 November 1994, 21 *International Legal Materials* (1982) 1261, <http://www.un.org/Depts/los/index.htm> (visited 20 May 2007).

[10] Declaration on the Establishment of New International Economic Order, UNGA Res. 3201 (1974).

[11] UNGA Res. 3281 (1974).

Common Heritage of Mankind;[12] and the Declaration on Friendly Relations.[13] Subsequently, trade and economic issues have dominated the G 77 docket.[14]

As a diplomat one is an insider to the deliberations on issues and the direction they take. Given the interests of a given country and the expertise of a country's diplomat, one may easily be identified (if a delegation releases one to be availed from a group) as one of two or three persons to join a contact group of the region; or of a larger grouping, such as the G 77, to negotiate with other groups. This is particularly important for small delegations as they cannot be present in numerous groups, and need to catch up when contact group members report to plenaries of the regional bloc or the 77 bloc.

In the 1970s, the key issues were those of decolonization; Rhodesia, apartheid, Palestine, refugees, human rights; environment, the law of the sea and the common heritage principle;[15] outer space; and economic issues. These issues engaged the author's generation at the time the author was becoming a staff member of the UNEP Secretariat.

As a diplomat, the author's energies went into several of the issues mentioned above, in addition to legal issues in the 6th Committee of the UNGA. These issues took the author to a variety of international committees and negotiating *fora* (the Political and Security Committee (1st Committee); the Law of the Sea and outer space; Economic and Social Committee (2nd Committee environment human rights); Special Political Committee (apartheid, Palestine, United Nations Relief and Works Agency for Palestine Refugees in the Near East (UNRWA); Other Committees: Social Committee of Economic and Social Council (ECOSOC) and UN Conference on the Human Environment (UNCHE) and its preparatory Committee and later UNEP Governing Council (GC)). In these areas the author was fully involved in the negotiations and processes.[16] Today, decolonization has been accomplished and in several of the other issues (Human rights Convention; Law of the Sea; Environment) solutions have broadly been reached. Nevertheless, issues of implementation remain on the agenda of the international community even today.

[12] The concept of common heritage of mankind was introduced in 1967 by Malta in the United Nations General Assembly in the discussion of the legal status of the deep sea. Subsequently, the concept was included in the 1970 Declaration on the Principles Governing the Sea-Bed and the Ocean Floor, and the Subsoil Thereof, beyond the Limits of National Jurisdiction, UNGA Res. 2749(XXV).

[13] Declaration on Principles of International Law Concerning Friendly Relations and Co-operation among States in Accordance with the Charter of the United Nations, UNGA Res. 2625 (1970).

[14] A. Chen, 'Weak versus Strong at the WTO' Geneva Post Quarterly (April 2006) at 55-107.

[15] As had been prompted by Dr A Pardo, Malta.

[16] During the Second University of Joensuu – UNEP Course, in my presentation 'The Stockholm Conference and the Birth of UNEP' the author spoke on two aspects of the negotiations in environment: locating the UNEP secretariat in Kenya and translating the Stockholm recommendations into the programme of UNEP during the First Session of the Governing Council in Geneva. Kenya 'loaned' the author to the delegation of Jamaica to assist the chair of G 77 (the Chair being from Jamaica). See D. Kaniaru, 'The Stockholm Conference and the Birth of the United Nations Environment Programme' in *International Environmental Law-making and Diplomacy Review (2005)* at 3.

At each period, in any particular broad issue, there are areas under which regional and group interests have to define positions or their interests vis-à-vis other groups or particular states. These group interests, sometimes referred to as alliances or coalitions, are typical in negotiations and are on-going in all matters such as in the issue of the environment. This can be seen in the birth, evolution and ongoing processes of UNEP; in the context of the Conferences of the Parties (COPs); in trade matters before the World Trade Organisation (WTO) negotiating rounds; and so forth.

As a government official one must remain alert, abreast of deliberations and involved. Questions that need to be kept in mind include: What are the issues? What needs to be done? What is the interest of one's country? Who, among like-minded countries, has clear expertise on the pertinent issue to brief delegates, analyze issues and technically advise on the way ahead? In the field of the environment many issues will require a science bent. Who has this? The training that was available on an *ad hoc* basis in the 1970s is currently systematically available[17] at global and regional levels, not to mention at national level. General and specific material is also available through recent books outlining experiences.[18]

At the regional and global levels, international organizations and governments are the key players. Governments are primary involved in international relations; they create organizations and mandate them to do certain things and to report to them in line with their founding constitutions, resolutions, and on-going decisions respecting pertinent mandates. They also provide funding and approve programmes and budgets. For the above stated organizations to decide their proposals, and the funding and implementation of these, they naturally interact with governments. The same is true in providing material to help in the negotiations of instruments.

As government representatives and officials, it is perhaps important to listen to the experience of people like the author; who started in government; [19] worked for

[17] UNEP initiated a series of Global Training Programmes in 1993 and these continue to be held every two years. At regional level such are held on specific issues by specific groups like judges. Before the Trade and Environment Committee of WTO meets, UNEP regularly holds sessions, for the developing countries on issues on the agenda and their environmental implications.

[18] A. Timoshenko, *Environmental Negotiations Handbook* (Kluwer Law International, 2003); UNEP, *Compliance Manual*, *supra* note 6, at 51; and the UNEP and University of Joensuu, *Multilateral Environmental Agreement Negotiator's Handbook* (University of Joensuu, 2006), available at <http://www.joensuu.fi/unep/envlaw/> (visited 30 May 2007).

[19] When one joins the secretariat of an organization like the UN or one of its organs, changes are noticeable. Underlining some:

1. First, shock. Seated on the secretariat side and not in usual government place, and listening to government representatives on the other side. Why? When they seemed to misappreciate issues; not know them; not be prepared or deep in knowledge. And yet one could not pick up the microphone and argue or straighten a matter. One has later discreetly to correct impressions or update the situation.
2. Confidence-building. The process of consultations may begin in confidence: this is mutual. Before issues come up – seek each other, discuss, assist informally with draft decisions. (Note, however, that in some organizations this may not be allowed.)
3. Be prepared with facts. In raising issues for negotiations, give facts; be clear; subtly answer to points of concerns. Leave decisions to governments.

several years in different capacities and on different issues; in negotiations of broad import to international society and then moved into an international organization to deal with issues of similar and different dimensions among governments and organizations, civil society, non-(inter)governmental organizations, and the private sector, and is now back with some government responsibility after all of this.

As a staff member to an international organization, one is placed in line to interact with governments; to be a secretary of meetings; to otherwise be able to brief governments - an important place in intergovernmental affairs. The staff member needs to be knowledgeable, informed and able to articulate issues; and to be credible both to his or her superiors in the organization, and with governments. These qualities are to be cultivated through constant contacts.

4. Are there lessons to be shared?

It is hoped that the following observations will prove useful.

On joining an international organization from government, one may have to 'eat humble pie' by having to prepare reports of the Secretariat that, as a government representative, you requested be done on a timely basis. Reports must be of adequate quality to meet the expectations of governments. One advantage is that you probably know exactly what was needed and can work on that, or can check with the pertinent government(s) to clear this. Your next point is to convince your superiors in your organization that the report – the response – is adequate and meets what was requested. Once agreed, the report is submitted by the head of the organization, secretariat or division to governments and all interested stakeholders.

What next? Any comments on it will come to the head or the entity that submitted the report. These will be referred to you to write clarifications; to respond; to defend, which responses will go back to your superiors. It may then be that the matter comes to a meeting (expert, or formal) and this often happens, for example, to the Committee of Permanent Representatives; to the Bureau or to the Council. Before that you must prepare a statement for the superiors to introduce the document.

It is useful to bear in mind that real-life negotiations have their special characteristics. For instance:

i) Some questions may be extremely naïve, uninformed. Such questions must be answered as politely as possible. One pities the government representative who shows such grave lack of knowledge or had not researched the background sufficiently.
ii) In a response by the head of the institution, he or she, of course, uses his or her own knowledge and the support information provided by the secre-

tariat. In the event that a specialized response is desired, he or she invites the expert staff at his or her disposal to provide more information. There is also a secretary to the meeting or a legal officer in the meeting who could possibly clarify or inform the committee in respective responsibilities.

An important point is therefore that you need to be really informed. Representing a country, you are presumed to know; knowledge about the country should be inherent. The value of training, like that provided by UNEP, is that you are not associated with your country: you can ask questions about matters that trouble you in your work without hesitation.

Another important point is that, when newly appointed to a secretariat, you may become frustrated when not in a position to speak, even when knowing the answer, due to your low level or rank. You simply have to accept the situation; or, in writing your brief to your supervisor, attempt to anticipate what may come up.

In intergovernmental *fora*, or in *fora* at the invitation of a secretariat, the initiative may occur in two ways:

(i) At the behest of governments in a specific decision or as anchored by rules of procedure. The meeting can be for government representatives; or for experts (either in a representative or individual capacity). A bureau often leads such meetings from representative regional blocs (chair, three vice; rapporteur; a total of five as per regional blocs). The secretary is provided by the secretariat. The governments take charge; the secretariat provides support and issues documents/reports as the groups submit to it.
(ii) At the determination of the head of the secretariat. This authority is usually mandated in the founding resolution, constitution or decision or in the rules of procedure. This type of initiative is orchestrated by the secretariat and is fairly delicate.

Such initiatives might occur because a head of an organization might feel that some initiative is worth presenting to governments involved in the governance of his or her institution. The feeling or initiative might be his or her own, or that of some governments; in the latter case he or she agrees to do something about it, usually with funding provided *ad hoc* by a group of governments.

Points to consider include: How much preparation needs to be done before raising the matter with governments? What is the timing of the initiative? Who is first to be invited and in what capacity? Is there a specific legislative basis for the activity or only a general mandate? Just as a government official should be knowledgeable, so should a secretariat official who should be aware of the background and substance that ought to be articulately presented – without appeals to emotion. Another question that might arise is whether the relevant governments, or a substantial number

of them, are prepared to work with the particular organization(s) on the matter, or not.

To illustrate with a few examples, some of which the author was involved in and some of which he has knowledge of:

1. The issue of trans-boundary movement of hazardous wastes or illegal trade in wastes. The issue came up and called for global attention. The Executive Director of UNEP, at the time, and his staff, were at the centre of developing the Basel Convention;[20] but at the same time Africa, which had been a victim of illegal waste dumping (in particular, in an incident involving an Italian ship dumping wastes in Nigeria), was of the view that the Convention should be comprehensive, strict, and ban all wastes, including nuclear, and stringently control its transportation and disposal. Global efforts were not so inclined. Africa therefore opted to negotiate a separate regional instrument, the 1991 Bamako Convention[21] and was initially reluctant to embrace the global Basel Convention. To its credit UNEP remained helpful to the Bamako/OAU process. Certainly, having an African head of UNEP was an important factor; in any case he was a unique negotiator himself.[22]

2. The issue of climate change, leading to the 1992 United Nations Framework Convention on Climate Change (UNFCCC).[23] By this time, UNEP was quite established in negotiating, concluding and implementing environmental instruments; such as conventions and protocols, both globally and regionally. Fresh in mind at the global level were the 1985 Vienna Convention on the Protection of the Ozone Layer;[24] and the 1987 Montreal Protocol,[25] which gave teeth to the former Convention. In the latter negotiations, intense effort and the leadership given by the Executive Director, Dr. M. K. Tolba, have in particular been noted. When the climate change issue came up, the UNEP ED and the World Meteorological Organisation WMO Secretary General (Professor G.O.P. Obasi), both from Africa (Egypt and Nigeria respectively), positioned themselves to move forward on the issue. Both UNEP and WMO cooperated on the World Climate Programme, and

[20] Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, into force 5 May 1992, 28 *International Legal Materials* (1989) 657, <http:// www.basel.int>.

[21] The Bamako Convention on the Ban of the Import Into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes Within Africa, Bamako, 30 January 1991, into force 22 April 1998, 30 *International Legal Materials* (1991) 773, <http://www.ban.org/Library/bamako_treaty.htm>.

[22] Mostafa K. Tolba UNEP Executive Director (1976-1992).

[23] UN Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849.

[24] Convention on the Protection of the Ozone Layer, Vienna, 22 March 1985, into force 22 September 1988, 26 *International Legal Materials* (1985) 1529.

[25] Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, into force 1 January 1989, 26 *International Legal Materials* (1987) 154, < http://www.unep.org/ozone/>.

one component was assigned to UNEP whose General Council welcomed it. Both organizations had also set up the IPCC (Intergovernmental Panel on Climate Change) and its secretariat has been manned, since then, jointly by both organizations. They further developed elements to assist in the negotiations toward a convention. In the UN General Assembly the governments were not comfortable with the initiative of the two organizations and their heads. The UNGA brought the process under its own authority and asked the two organizations to cooperate and to provide necessary support directly to the preparatory process and through the IPCC. This was done with UNEP's legal and science staff; and, to date, the IPCC still backs up the Convention.

3. For UNEP, a comfort was that the process (for the creation) of the Convention on Biological Diversity (CBD) (1992)[26] was assigned to it; however, the United Nations Convention to Combat Desertification (UNCCD) (1994)[27] followed the UNFCCC approach even though UNEP had vast technical support, having been secretariat of the United Nations Conference on Desertification Control (UNCOD) in Nairobi in 1977, which the Executive Director headed as the Secretary General of the Conference. Again, UNEP provided backup to the conference and later to the Secretariat of the Convention, and to its delegates from different regions, in preparing for particular COP issues.

The point to be noted is that activism and success can at times be painful for an organisation, and for UNEP this was certainly the case. Nevertheless, as an instrument of governments, UNEP (has) continued to offer its support.

4. Compliance and enforcement leading to *Guidelines* and the *Manual on Compliance with and Enforcement of Multilateral Agreements (MEAs)*, 2006. The issue of compliance and enforcement was an issue in UNEP's Montevideo II programme; but this had not been implemented due to lack of funds. An opportunity arose when the G8 group of developed countries met in the UK in 1997 and asked the UNEP Executive Director to take the initiative to implement this item. The UK and several G8 countries agreed; and actually offered to provide funds. The process started with defining the activity; with the first meeting being held in Geneva in July 1998. Three convention secretariats provided respective experiences – the Basel and Ozone Convention secretariats; and that of the Convention on International Trade in

[26] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>.

[27] UN Convention to Combat Desertification in Countries Experiencing Serious Drought and or Desertification, Particularly in Africa, Paris, 17 June 1994, into force 26 December 1996, 33 *International Legal Materials* (1994) 1309, <http://www.unccd.int>.

Endangered Species of Wild Fauna and Flora CITES.[28] Also participating were the World Customs Organization (WCO) and Interpol. The present author chaired the meeting, which got off to a rough start. Questions that arose included: Did we have a mandate? Was it clear? Why were we involved and was UNEP the best placed to lead the process? We argued that UNEP had a mandate.

In subsequent years, with colleagues participating,[29] the stormy waters settled. We motivated for a specific GC decision; more funding became available; the structure of the Guidelines was agreed on. We moved from experts in individual capacity to government-designated experts and agreed Guidelines that were adopted at Cartegena, Colombia.[30] Governments also adopted Guidelines, based on the *UNEP Guidelines,* in Kiev in May 2003. UNEP General Council requested that the *Guidelines* be tested. Consequently, that month, the *Manual*, not a negotiated and government-approved tool, was issued; culminating from work that had sprung from Montevideo II and was spurred into action by funding from G8 members and others.

5. Governance issues of UNEP; in particular whether all members of the UN become its members – up from 58 members of the Governing Council elected every so often by the UNGA. At the 2002 World Summit on Sustainable Development (WSSD) in Johannesburg, and later the UNGA. No regional bloc pushed for universal membership, and the matter is still pending. A related issue is whether UNEP should change from a programme to a specialized agency, perhaps even a World Environment Organization (WEO). This issue, initiated by France, has still to be settled. In fact, issues of environmental governance and its architecture would require a separate training course in themselves.

6. Regional Conventions. UNEP has spearheaded many such instruments in regional seas and other areas. Two African instruments[31] can be mentioned in which UNEP was, alone or with others, asked to lead the process by the governments or organizations concerned. In such cases there was no problem with initiative.

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[28] Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington DC, 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, <http://www.cites.org>.

[29] Mainly Iwona Rummel-Buska and Elizabeth Mrema, both still staff at the UNEP.

[30] Special Session of the Governing Council/Global Environment Ministerial Form, February 2002, Decision vii/4.

[31] The Lusaka Agreement on Cooperative Enforcement Operations Directed at Illegal Trade in Wild Flora and Fauna, Lusaka, 8 September 1994, available at <http://www.internationalwildlifelaw.org/lusaka.pdf> (visited 30 May 2007); and the African Convention on the Conservation of Nature and Natural Resources, adopted in 1968 and revised in 2003, available at <http://www.africa-union.org/root/AU/Documents/Treaties/Text/nature%20and%20natural%20recesource.pdf> (visited 30 May 2007) – with UNEP and the IUCN (the World Conservation Union) taking lead in preparations at the request of the OAU.

The point to be noted here is that, in each case of negotiations, the issues have to be carefully researched, views of different interests appraised, clarifications sought from key proponents and the matters frankly discussed. Timing is a crucial factor as well.

5. Conclusion

As a negotiator one needs to be armed with a clear brief on national interests; be backed up with science; and be consistently involved in the negotiations. One should also know other sides' interests, and who their key negotiators are; and understand the power game – so as to be able to pin negotiations on substance and to be aware of procedural requirements as well.

Government officials and United Nations staff members should work in both setups for completeness of diplomatic engagement and delivery. In so doing, there will be better appreciation of instructions by governments in decisions, and in reporting back to governments by secretariats. It is often necessary to build up confidence in both sides, for mutual benefit.

International Environmental Negotiations and the EU: A Practical View-point

Nicola Notaro[1]

1. The EC and the EU

1.1 Where does it all come from?

It is impossible briefly to sum up the fifty years of history of the European Community and the more recent European Union.[2] Moreover, this would also be beyond the purpose of this short paper aimed at sharing some practical experience acquired through the author's years of work in the area of international environmental negotiations for the European Commission. It is however useful to recall the reasons that motivated the founders of the Community when they set out to build what arguably has become one of the most interesting and important political constructions of the twentieth century.

After World War II, Europe was in trouble. Sixty million people had lost their lives, devastation was everywhere, and European economies needed to be rebuilt. European populations had fought each other for centuries trying to acquire supremacy and control over the whole continent; often unsuccessfully, and always for a limited period of time. Eventually, they had come very close to self-destruction; and to determining the *finis Europae*, the 'end of Europe'. These historical conditions provided fertile terrain for ideas aimed at going beyond the idea of nation-States and towards some kind of European federalism. It was in this context that six European

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[2] The literature on the development of the European Community is endless. For a synthetic but accurate account of the historical development of the EC/EU see Gloeckler et al, *Guide to EU Policies* (Blackstone, 1998).

countries[3] decided to team up in the exploitation of fundamental resources and created the European Coal and Steel Community (ECSC)[4] by signing the Treaty of Paris in 1953. This co-operation expanded to the whole economy with the signature by the same group of States of the Treaties of Rome in 1957 that created the European Economic Community (EEC)[5] and the European Atomic Energy Community (EAEC).[6]

The original Treaties have changed considerably over the years; and the areas covered by "Community competence" have expanded considerably.[7] Four major overhauls of the Treaty of Rome on the EEC have taken place; and a number of more limited amendments have also been adopted. This has led, *inter alia*, to the addition to the Treaty of a specific Title devoted to the environment (Title XIX) covering both the internal and external actions of the Community. Importantly, the European Economic Community has become, since 1992, the European Community to signify the expansion of its competence beyond the mere economic field, and its membership has dramatically increased, through several waves of accession, to include twenty-seven Member States as of 1 January 2007.[8]

In 2004, a new, and significant, overhaul of the Treaty was decided upon by the European Heads of State and government. This was aimed at turning the original Treaty of Rome, as modified and developed over the years, into the European Constitution[9] by integrating into it the European Charter of Human Rights and some important institutional changes. The Constitution could only enter into force after ratification by the then twenty-five Member States; but the ratification process slowed down considerably after the French and Dutch citizens voted against the Constitution in national referenda. At present, sixteen Member States have ratified the Constitution and it is uncertain what will happen to it. In June 2007, during the German Presidency, the European Heads of State and government took a decision on the way forward.

[3] Belgium, France, Germany, Italy, Luxembourg and the Netherlands.

[4] This Treaty entered into force on 24 July 1952 and expired on 23 July 2003. It had a validity of 50 years and was not renewed; and coal and steel have been subsumed under EC Treaty. For more information, see <http://europa.eu/scadplus/treaties/ecsc_en.htm> (visited 20 May 2007).

[5] For a consolidated version of the EEC Treaty see OJ 2002 No. *C325/33. See also <http://europa.eu/scadplus/treaties/eec_en.htm> (visited 20 May 2007).*

[6] See <http://europa.eu/scadplus/treaties/euratom_en.htm> (visited 20 May 2007).

[7] For electronic access to the original Treaties and all their amendments see <http://eur-lex.europa.eu/en/treaties/index.htm> (visited 20 May 2007).

[8] Austria, Belgium, Bulgaria, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, United Kingdom.

[9] OJ 2004 No. C 310/01.

1.2 The three 'pillars'

The origin of the dichotomy between the EC and the EU is to be found in the amendments to the EC Treaty that originate from the Maastricht Treaty of 1993.[10] In Maastricht, the 1957 Treaty of Rome became the so called 'first pillar' (or the EC pillar). This is the area where the transfer of competence and sovereignty from the EC Member States (MS) to the European Community is more extensive; and includes the internal market, trade policy, agriculture and fisheries policies, and also environmental policy. In this area the Community institutions play a very important role; and the EC goes far beyond traditional inter-governmental co-operation and towards some elements of a federal State.

Also in Maastricht, a new Treaty was created to complement the EC pillar; the EU Treaty comprising a second pillar on Common Foreign and Security Policy (CFSP); and a third pillar on Justice and Home Affairs. These last two areas are at the heart of State sovereignty. Therefore, it was chosen to keep them separate from the EC pillar in a different treaty based on intergovernmental cooperation rather than on the 'Community method'; and under which the Community institutions such as the Commission and the Court of Justice would play a much more limited role.

As a result of Maastricht, in strictly legal terms, 'EC' refers to matters covered under the first pillar; while 'EU' refers to the much more limited second and third pillars. However, many commentators, particularly the media, tend to use the abbreviation 'EU' to refer to the EC and the MS as a whole without any reflection of the above legal distinction.

1.3 Who does what?

Four main institutions play a fundamental role in relation to environmental policy in the European Community. The Commission is the 'warden' of the Treaty. It has, in first pillar matters, the exclusive right to propose legislative initiatives; it monitors implementation and enforces EC law and is tasked with the legal representation of the Community at the international level. It is composed of a College of twenty seven members designated by the MS (one per country) with the agreement of the European Parliament on the overall body. It is supported by an administrative structure of about twenty thousand civil servants.

The Council of Ministers is composed of representatives of the MS at ministerial level and sits in various formations; one of which is the Environment Council. The latter is a co-legislator with the European Parliament on EC environmental matters; and also decides upon the position of the Community in regard to international environmental negotiations.

[10] OJ 1992 No. C 191/01.

The European Parliament, directly elected by the citizens of all MS, is a co-legislator with the Council in a number of fields, including that of the environment. It plays a limited role in relation to international negotiations.

The European Court of Justice (ECJ) ensures the respect of the rule of law in the Community and plays a significant role in ensuring the compatibility of international agreements to be concluded by the Community with EC law; as well as in clarifying the respective competences of the Community and of the MS. In particular, the European Parliament, the Council, the Commission or a Member State of the EU may obtain the opinion of the Court as to whether an agreement envisaged is compatible with the EC Treaty. In case the opinion of the Court is negative, the international agreement in question may only enter into force after an amendment of the Treaty on the basis of the appropriate procedure.

2. EC participation in MEAs

2.1 The legal base

The legal action of the EC in environmental matters, as well as its participation to international negotiations, is based upon Title XIX of the EC Treaty containing Articles 174 to 176. Under Article 174, Community policy on the environment shall contribute to 'promoting measures at international level to deal with regional or worldwide environmental problems'. It is therefore one of the objectives of EC environment policy to address environmental problems that are of a transboundary nature. The same provision also clarifies how such environmental issues shall be addressed by stating:

> '[w]ithin their respective spheres of competence, the Community and the Member States shall cooperate with third countries and with the competent international organisations. The arrangements for Community cooperation may be the subject of agreements between the Community and the third parties concerned, which shall be negotiated and concluded in accordance with Article 300.'

The above provision enshrines at the highest level in the EC hierarchy of norms, i.e. in the Treaty, EC support for multilateral solutions to environmental problems of a regional or worldwide nature. It also recognizes that environment is an area of shared competence where both the MS and the Community can conclude international agreements with third countries, where these agreements are in accordance with the Treaty's procedures.

In practice, about seventy percent of EC environment related legal acts are linked to the implementation of international commitments. The EC is a Party to about forty Multilateral Environmental Agreements (MEAs) at either global or regional

level. In order for the EC to become a Party to a MEA, a special clause allowing the participation of a Regional Economic Integration Organisation (REIO) needs to be inserted in the MEA in question.[11]

After the Maastricht Treaty that marked the transition, or evolution, of the EEC into the EC, the reference to economic integration to define the EC might sound almost obsolete. However, the presence of REIO clauses at least allows the EC to exercise its external competence in environmental matters. The situation is more difficult in relation to 'old Conventions' such as CITES[12] and RAMSAR,[13] MEAs that were concluded in the 1970s, or before, were concluded when the EC was not yet a significant international player in environmental matters; and do not therefore contain REIO clauses. In these cases, the EC enjoys observer status only and its full participation is hampered.

2.2 The legal procedure

For the negotiation of a new MEA, the EC Treaty requires the following of a specific procedure, enshrined in its Article 300. According to the latter Article, the Commission makes recommendations to the Council to mandate it to open negotiations for an international agreement. Usually, the Council provides the Commission with such a mandate by means of a Council Decision containing negotiating directives that the Commission has to follow (Article 300(1)). When the international negotiations have been successfully concluded, and a new international agreement is open for signature, the Commission proposes a Council Decision authorizing the signature of the agreement; and, subsequently, a new Council Decision authorizing the ratification (Article 300(2)). These decisions are, generally, taken by the Council by qualified majority.

Different procedures apply for different cases. For instance, when the international negotiations concern the amendment of the main body of an existing treaty, the Commission will firstly request a mandate from the Council to negotiate the amendment; and then will propose a Council decision for its ratification.

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[11] E.g. Art. 3(j) and 36 of the Cartagena Protocol on Biosafety (Cartagena Protocol on Biosafety, Cartagena, 29 January 2000, in force 11 September 2003, 39 *International Legal Materials* (2000) 1027, <http://www.cbd.int/biosafety/default.shtml>. Art. 3(j): '"Regional economic integration organization" means an organization constituted by sovereign States of a given region, to which its member States have transferred competence in respect of matters governed by this Protocol and which has been duly authorized, in accordance with its internal procedures, to sign, ratify, accept, approve or accede to it'; Art. 36: 'This Protocol shall be open for signature at the United Nations Office at Nairobi by States and regional economic integration organizations…'.

[12] Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington DC, 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, <http://www.cites.org>.

[13] Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 February 1971, in force 21 December 1975, 11 *International Legal Materials* (1972), 963, <http://www.ramsar.org>.

When the international negotiations concern more limited and well defined amendments, such as a technical or scientific update of an Annexure to an MEA, and only limited international negotiations are expected, the Commission will not ask for a mandate; but instead will directly propose a Council decision establishing the EC position on the amendment in question (Article 300)2)).

In general, for 'ordinary' decisions of Conference of the Parties (COPs) to MEAs that do not entail changes to the MEA, there will be no need for a mandate or for other Council decisions. However, if the COP decisions are likely to have legal effects, for example because they will contain treaty language or will set out international standards that the Community will be expected fully to implement, either a mandate or a Council decision based on Article 300.2 will be necessary, depending on whether the text of the COP decision will be the subject of a negotiation process or the subject of very limited negotiations.

Therefore, the early analysis of the agendas of forthcoming international meetings is essential for the EC to be able to follow the correct procedures under the EC Treaty in its preparation process.

3. Shared competence in MEAs

The very notion of an REIO implies a transfer of competence from the MS to the REIO. This transfer can cover a particular area completely, thereby creating an exclusive competence for a REIO; or might be partial only, determining a situation of shared/joint competence. In the fields of trade, agriculture and fisheries, the EC has exclusive competency on most subject matters. The same is true for many issues related to the internal market. In the field of environment, as mentioned above, Community competence can be generally characterized as either shared or joint.

The notion of shared competence explains why both the EC and its MS become Parties to MEAs; but also creates tensions between the MS and the Community as their respective readings of who does what in international negotiations may differ.

The competence of the Community, be it exclusive or shared, is always based on the EC Treaty. While it is clear that the Commission negotiates for the Community on matters under exclusive competence; for shared competence the 'rule of thumb' is to refer to the extent of the *acquis*[14] related to the subject matter of the negotiations. The more extensive EC legislation is on a certain matter, the more justified it will be for the Community to negotiate on the same matter at the international level.

[14] This term, in Community jargon, encompasses the whole body of EC policy and legislative measures in place.

Due to the extensive legislative action undertaken by the Community in the environmental field, Community competence here is often shared but predominant. In these cases, it is for the Commission to lead international negotiations rather than for whichever MS is then holding the (rotating) Presidency of the EU.

The implications of characterizing an issue as exclusive or shared competence are important also for the ratification of an MEA; and one can witness a trend in the Commission to choose the trade legal base[15] to ratify MEAs whenever the latter have a strong trade component. This is countered by the Council preference always to resort to the environment legal base excluding any other Treaty article. This has generated interesting, but not always crystal clear, case law in the European Court of Justice on the appropriate legal base for the ratification of MEAs.[16]

In any event, independently of who is representing the EC and its MS in international negotiations, the Community institutions and the MS are bound by a duty of loyal cooperation enshrined in Article 10 of the EC Treaty. MS and the Commission have to coordinate their positions, in respect of international meetings, in a specific Working Group of the Council dealing with international environmental matters. Such coordination processes also take place during the international meetings themselves; in order to ensure the unity of the external representation of the EU throughout the negotiations.

It is also worth noting that the ratification of an MEA by the EC binds the MS on matters covered by EC competence; even when they have not themselves become Parties to the MEA in question.

4. Functioning in practice

Despite its complex institutional and legal structure, the overall system of coordination and representation of the EC and its MS in environmental negotiations works relatively well. In practice, there is a rather flexible sharing of roles amongst the EU Presidency, the Commission, and the MS. The EU as a whole is certainly recognized as a leading partner; without the participation of which it is difficult for any significant deals to be struck in any fora. The fact that, under many MEAs, voting is rarely resorted to and most decisions are taken by consensus smoothes the EC internal debate on competence; as it is often not necessary to determine whether it is for the Commission to exercise the right to vote on behalf of the twenty seven (because there is a predominant Community competence), or whether it is for the

[15] Art. 133 of the EC Treaty.

[16] For recent examples, see Opinion 2/00 [2001] ECR I-9713, on the legal base for the ratification of the Cartagena Protocol on Biosafety; and Case C-94/03 ECR [2006] I-1, on the legal base for the ratification of the Rotterdam Convention on the Prior Informed Consent Procedure (PIC) for certain hazardous chemicals and pesticides in international trade.

MS to vote individually.[17]

The above (arguably positive) practice cannot, however, completely conceal an underlining tension between the Commission and the Council. They have, in their attempts to provide, respectively, the most Community oriented or the most MS' oriented application of the rules, developed a certain level of mistrust with respect to each other which is not very healthy.

Furthermore, there are some practical internal problems that cannot be ignored. For instance, MS sometimes contest the need for mandates or Council decisions in view of international negotiations; and prefer the adoption of simple 'Council Conclusions', which are a hybrid type of act of a non-legislative character and which are not based on the EC Treaty and have developed only through practice. These Conclusions are not proposed by the Commission; and are generally adopted by consensus. They are often general and vague; and do not respect the right of initiative of the Commission. They are not a valid replacement for a legal act required under the Treaty; and have, in practice, limited value. Occasionally though, when they have contained precise language, they have proved helpful in holding the positions of the MS together in some difficult international negotiations.

Another practical problem which sometimes arises is the attempt by some MS to profit from the lack of clarity in the distribution of competencies and to make unilateral submissions to MEAs; for instance, in order to propose amendments to an annex to an MEA by listing a new substance or an additional species. In this case, if the EC is also a Party to the MEA to be amended, a change in EC law would be necessary as a consequence of the proposal made by a MS. These attempts to change EC legislation by promoting international action inconsistent with it are no doubt in violation of Article 10 of the EC Treaty, and the principle of loyal co-operation contained therein, and might become the subject of a challenge by the Commission before the ECJ.

Additional controversies arise in relation to the drafting of declarations of competencies; which is required by some MEAs when both an REIO and its MS become Parties to those treaties.[18] Because it is very difficult for the EC and its MS to agree

[17] See for instance, Article 31(2) of the Convention on Biological Diversity (Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>):

'Regional economic integration organizations, in matters within their competence, shall exercise their right to vote with a number of votes equal to the number of their member States which are Contracting Parties to this Convention or the relevant protocol. Such organizations shall not exercise their right to vote if their member States exercise theirs, and vice versa.'

[18] See for instance, Article 34(3) of the CBD: 'In their instruments of ratification, acceptance or approval, the organizations referred to in paragraph 1 above shall declare the extent of their competence with respect to the matters governed by the Convention or the relevant protocol. These organizations shall also inform the Depositary of any relevant modification in the extent of their competence.'

internally on who is competent for what, and to what extent, the drafting of a declaration of competence to be annexed to the EC instrument of ratification provides a catch-22 situation. More often than not, this results in vague or convoluted language that does little to explain EC competence to the depositary or to third parties.[19] The latter are in fact often very confused about the respective roles of the Commission and of the (rotating) Presidency. They have difficulty understanding who speaks on what and why; who votes and when; or why there are the EC, the EU and the MS as well. This confusion does not have the effect of marginalizing the EU, as it is too significant a player for that to happen; but it does have negative consequences in terms of visibility, continuity of action in negotiations, and the building of good working relationships with third parties.

5. The Constitution: Steps forward; and uncertainties

The Constitution mentioned in Section I would introduce some simplification to the EU/EC institutional framework; which simplification would be a step forward. Firstly, the EU would obtain international legal personality; and completely replace the EC. This would eliminate the dichotomy between the EC and the EU; and would lessen the degree of confusion both within and outside of the EU. In addition, the new Constitution would formally recognize the Commission as the external representative of the EU; except for the field of CFSP. This could, to some extent, help in clarifying the distinct roles of the EU Presidency and of the Commission. The Constitution would also provide a list of matters that fall under shared competence.

On the other hand, the Constitution also introduces some new institutions whose respective roles are not very clearly defined. This is the case with the President of the Council and the Minister for Foreign Affairs; who would sit at the same time in the Council and in the Commission. The coexistence of these two figures and the President of the Commission, with each having a role to play, albeit to different extents, in external affairs seems likely to create confusion. Moreover, an amendment introduced in the above mentioned Article 300 of the EC Treaty, referring to a 'Union negotiator or head of the Union's negotiating team' also raises some questions; as it seems that some body other than the Commission may be mandated by the Council to negotiate the agreements foreseen in that provision. This negotiator would be the Minister for Foreign Affairs in matters under the CFSP; but it is unclear whether for other areas it might only be the Commission or, for instance, the Presidency together with the Commission and the MS.

[19] For example, see the Council Decision concerning the conclusion, on behalf of the European Community, of the Cartagena Protocol on Biosafety and the declaration annexed thereto, *OJ 2002 No. L201/48.*

Beyond the above questions, however, the main current uncertainty surrounds the entry into force of the Constitution; or whether this will not happen. It will only be in June 2007 that the European Heads of States and governments will take a decision on a possible 'Plan B' to rescue the European Union from the institutional impasse into which it has been precipitated by the rejection of the Constitution in 2005 by two of its founder States, France and the Netherlands.

Designing Compliance Mechanisms under Multilateral Environmental Agreements

Tuomas Kuokkanen[1]

1. Introduction

In order to regulate and manage various environmental problems, specific substantive rules and techniques have been developed during past decades. Through this development, international environmental law has gradually evolved as a specific body of international law. In addition, several environmental institutions have been established for the administration and further development of environmental agreements. The specialized environmental law-making and regime-building stemmed from the fact that general or traditional international law alone was not sufficient to deal with particular environmental issues.

Environmental law-makers did not regard traditional law as insufficient merely from a substantive point of view; but also in regard to compliance and enforcement. In their eyes, traditional rules on breaches of treaties fell short of securing parties' actual implementation of and compliance with substantive rules. Moreover, the traditional enforcement doctrine seemed not to address environmental concerns adequately. The problem with the dispute settlement mechanisms, for instance, was that recourse to such mechanisms requires consent and legal interest from an injured party. In addition, because of the confrontational nature of dispute settlement the threshold to use it was, and still is, relatively high. As to the doctrine of state responsibility, it appeared that states were reluctant to develop more detailed provisions on it. Rather, states preferred to shift the focus from state responsibility to civil liability. In the same vein, the consequences of breaches of treaties, according to treaty law, were designed on the basis of reciprocal treaty obligations; whereas for environmental treaties it seemed more appropriate to seek to bring a non-compliant party back into compliance, than to exclude such a party from the treaty.

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These types of philosophical and practical reasons led environmental policy-makers, in the late 1980s and early 1990s,[2] to consider alternative ways to manage compliance issues. They believed that new mechanisms should go beyond mere peer pressure but still remain non-adversarial.[3] The first such regime was adopted under the Montreal Protocol on Substances that Deplete the Ozone Layer.[4] After that breakthrough, compliance regimes were established under many global and regional multilateral environmental agreements. A compliance mechanism was established at the global level under the Cartagena Protocol,[5] the Basel Convention[6] and the Kyotso Protocol.[7] At the regional level, a mechanism was adopted under the Long-range Transboundary Air Pollution Convention[8] to deal with individual protocols;

[2] Some environmental conventions addressed de facto compliance issues already earlier, even though they did not introduce compliance mechanisms. See in particular work under the CITES (Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, D.C., 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, <http://www.cites.org>. and the Convention on the Conservation of European Wildlife and Natural Habitants, Berne, 19 September 1979, in force 1 June 1982. See Susan Biniaz, 'Remarks about the Cites Compliance Regime', in Ulrich Beyerlin, Peter-Tobias Stoll and Rüdiger Wolfrum (eds), *Ensuring Compliance with Multilateral Environmental Agreements. A Dialogue between Practitioners and Academia.* (Martinus Nijhoff Publishers, 2006) 89-96; Summary Record of the fifty-fourth meeting of the CITES Standing Committee, Geneva, 2-6 October 2006; Guidelines for compliance with the Convention on International Trade in Endangered Species of Wild Fauna and Flora, Fourteenth Meeting of the Conference of the Parties, The Hague (Netherlands), 3-15 June 2007, COP 14 Com. II.21; Rules of Procedure of the Standing Committee of the Bern Convention, available at <http://www.coe.int>.

[3] See Patrick Széll, 'Introduction to the discussion on Compliance', 2004 *International Environmental Law-making and Diplomacy Review*, 117-123.

[4] The non-compliance procedure was adopted on a provisional basis at the Second Meeting of the Parties to the Montreal Protocol (Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, into force 1 January 1989, 26 *International Legal Materials* (1987) 1516, < http://www.unep.org/ozone/>) in London, 27-29 June 1990 (Decision II/5). The procedure was finally adopted at the Fourth Meeting of the Parties, Copenhagen, 23-24 November 1992. See Decision IV/5, Report of the Fourth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, UN Doc. UNEP/OzL.Pro 4/15 (1992) at 17. The procedure was reviewed as the result of Decision IX/35 and amended in a number of minor ways at the Tenth Meeting of the Parties, Cairo, 23-24 November 1998 (Decision X/10). Hereinafter, the compliance mechanism under the Montreal Protocol is referred to as 'Montreal Protocol compliance mechanism'.

[5] Cartagena Protocol on Biosafety, Montreal, 29 January 2000, in force 11 September 2003, 39 *International Legal Materials* (2000) 1027*;* Establishment of the procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety, BS-I/7, UN Doc. UNEP/CBD/BS/COP-MOP/1/15 (2004).

[6] Basel Convention (Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, into force 5 May 1992, 28 *International Legal Materials* (1989) 657, <http://www.basel.int>); Terms of Reference for the Mechanism for Promoting Implementation and Compliance, Decision VI/12, UN Doc. UNEP/CHW.6/40 (2003) 45. See Akiho Shibata, 'Ensuring Compliance with the Basel Convention – its Unique Features, in Beyerlin et al. (eds), *Ensuring Compliance with Multilateral Environmental Agreements, supra* note 2, 69-87.

[7] Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto, 10 December 1997, into force 16 February 2005, 37 *International Legal Materials* (1998) 22; Procedures and mechanisms relating to compliance under the Kyoto Protocol, Decision 27/CMP.1, 9-10 December 2005, UN Doc. FCCC/KP/CMP/2005/8/Add.3 (2005) at 92-103.

[8] Convention on Long-Range Transboundary Air Pollution, Geneva, November 13 1979, in force 16 March 1983, 18 *International Legal Materials* (1979) 1442, Decision 1997/2 of the Executive Body Concerning the Implementation Committee, Its Structure and Functions and Procedure for Review of Compliance. The decision was amended by Decision 2006/2.

and also under the Espoo Convention,[9] the Aarhus Convention,[10] the Alpine Convention[11] and the Water and Health Protocol.[12] Moreover, negotiations are currently ongoing relating to the establishment of several compliance mechanisms. This is the case, for instance, with regard to the London Dumping Convention,[13] the Rotterdam Convention,[14] the Stockholm Convention,[15] the Protocol on Pollutant Release and Transfer Registers,[16]and the International Treaty on Plant Genetic Resources for Food and Agriculture.[17]

The importance of compliance control has also been stressed in several decisions and declarations adopted at the international level. In addition, in 2002 the UNEP

[9] Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 25 February 1991, in force 10 September 1997, 30 *International Legal Materials* (1991) 802; Decision III/2 by the Meeting of the Parties under the Espoo Convention on Review of Compliance, UN Doc. ECE/MP.EIA/6 (2004).

[10] Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters, 25 June 1998, in force 30 October 2001, 38 *International Legal Materials* (1999) 517; Decision I/7, Review of Compliance, Report of the First Meeting of the Parties to the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, UN Doc. ECE/MP.PP/2/Add.8 (2004).

[11] Convention on the Protection of the Alps, Salzburg, 7 November 1991, into force 6 March 1995, 31 *International Legal Materials* (1992) 767; Compliance Mechanism adopted by the 7th Alpine Conference in Merano, Italy, on 19 November 2002. Unofficial translation provided by the Swiss Ministry of Foreign Affairs is provided in 33 *Environmental Policy and Law* (2003) 179-180.

[12] Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, London, 17 June 1999, Doc. MP.WAT/2000/1, EUR/ICP/EHCO 020205/8Fin; Compliance Procedure under the Protocol on Water and Health, adopted at the First Meeting of the Parties, 17-19 January 2007, available at <http://www.unece.org/env/water/meetings/meetings.htm> (visited 30 May 2007).

[13] Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter, London, 13 November 1972, in force 30 August 1975, 11 *International Legal Materials* (1972) 1294, <http://www.londonconvention.org/>; First Meeting of Contracting Parties to the 1996 Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter 1972, 30 October – 3 November 2006, Doc. LP 1/7 (2006).

[14] The current draft text of the procedure and mechanisms on compliance with the Rotterdam Convention (Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam, 11 September, 1998, in force 24 February, 38 *International Legal Materials* (1999) 1), RC-3/4, is contained in annex I of the Report of the Conference of the Parties to the Rotterdam Convention on the work of its third meeting, Geneva, 9-13 October 2006, UN Doc. UNEP/FAO/RC/COP.3/26.

[15] Convention on Persistent Organic Pollutants, Stockholm, 22 May 2001, in force 17 May 2004, 40 *International Legal Materials* (2001) 532; the current draft text on non-compliance, SC-3/30, is contained in annex I to the Report of the Conference of the Parties of the Stockholm Convention on Persistent Organic Pollutants on the work of its third meeting, Dakar, 30 April-4 May 2007, UN Doc. UNEP/POPS/COP.3/30.

[16] Protocol on Pollutant Release and Transfer Registers Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters, Kiev, 21 May 2003, not yet in force, available at <http://www.unece.org/env/pp/prtr/docs/PRTR%20Protocol%20English.pdf> (visited 30 May 2007); Draft Decision of Review of Compliance, UN Doc. ECE/MP.PP/AC.1/2007/L.2, Working Group on Pollutant Release and Transfer Register, Fourth Meeting, Geneva, 14-16 February 2007.

[17] International Treaty on Plant Genetic Resources for Food and Agriculture, Rome, 3 November 2001, in force 29 June 2004, FAO Resolution 3/2001; First Session of the Governing Body of the International Treaty on Plant Genetic Resources for Food and Agriculture, Madrid, 12-16 June 2006, Doc. IT/GB-1/06/Report.

Governing Council adopted Guidelines on implementation of multilateral environmental agreements.[18] Those guidelines were followed in 2003 by regional guidelines adopted by the United Nations Economic Commission for Europe.[19]

The establishment of compliance mechanisms has, consequently, become almost a standard procedure in multilateral environmental agreements. Nevertheless, one can ask whether the creation of compliance mechanisms has enhanced compliance with and implementation of multilateral environmental agreements. Has the deviation from the traditional international rules really been necessary in order to elaborate specialized techniques; or has the development, by contrast, led to unnecessary fragmentation of international law and to undermining of the importance of traditional international law? Moreover, one can ask whether the mechanisms established so far have operated effectively. In order to answer these questions, the present article first examines the main features of compliance mechanisms. Thereafter, it explores the practice of the different regimes.

2. Main characteristics of compliance mechanisms

The purposes and objectives of different compliance regimes are quite similar. On the one hand, such mechanisms seek to prevent non-compliance; and, on the other hand, to bring parties back into compliance if they have failed to comply. They are characterized, for example, as non-confrontational, simple, non- or quasi-judicial, transparent, facilitative, consultative, non-adversarial and cooperative. Their main functions are usually to review compliance with reporting obligations and to deal with individual submissions. Some compliance committees prepare general reviews of treaty compliance. In addition, committees might have specific functions; for example, the compliance committee under the Kyoto Protocol determines eligibility criteria under the Kyoto mechanisms.

It is commonplace that a special body, usually called a compliance committee or an implementation committee, is established to manage compliance procedures. While such bodies were at the beginning comprised of party representatives, the more recent trend is that members act in a personal capacity. Members are often required to have expertise relating to relevant scientific, technical, legal or socio-economic fields. Compositions of committees, in particular of global ones, reflect geographical distribution.

[18] Guidelines on compliance with and enforcement of multilateral environmental agreements, UN Doc. UNEP/GCSS.VII/4/Add.2 (2002), available at <http://www.unep.org/GC/GCSS-VII/> (visited 30 May 2007). See Elizabeth Maruma Mrema, 'Implementation, Compliance and Enforcement of MEAs: UNEP's Role', 2004 *International Environmental Law-making and Diplomacy*, 125-149. See also Manual on Compliance with and Enforcement of Multilateral Environmental Agreements (UNEP, 2006) available at <http://www.unep.org/dec/docs/UNEP_Manual.pdf> (visited 30 May 2007).

[19] Guidelines for Strengthening Compliance with and Enforcement of MEAs in the ECE Region, UN Doc. ECE/CEP/107 (2003).

There are different means to commence or trigger a compliance procedure. All mechanisms allow a party itself to trigger a compliance procedure. Most mechanisms also allow parties to trigger the process against other parties, even though some procedures have established particular qualifications. Furthermore, it is common that secretariats can trigger the process. The procedure provided under the Espoo Convention allows even the committee itself to trigger the process. The multilateral consultative process under the United Nations Framework Convention on Climate Change,[20] which was adopted but never put into operation, allows the Conference of the Parties to trigger the process. The compliance mechanism under the Kyoto Protocol mandates expert review teams to submit questions on implementation to the committee. Under the Aarhus Convention and the Water and Health Protocol, individuals or non-governmental organizations can also trigger the process.

Different types of consequences for non-compliance, ranging from preventive and facilitative measures to reparative measures, can be adopted under compliance regimes. With regard to preventive and facilitative measures, compliance mechanisms can, for instance, provide advice and recommendations or facilitate financial and technical assistance. Training and other capacity-building measures may also be provided to the parties concerned. Furthermore, through the mechanisms, cautions and declarations of non-compliance may be issued or special publicity given to cases of non-compliance. As to reparative measures, compliance mechanisms may require a party in non-compliance to develop a compliance action plan aimed to bring itself back into compliance. In addition, specific rights and privileges of a non-compliant party of the treaty in question may be suspended. There are also some tailor-made consequences that are designed in light of the subject matter of the concerned environmental agreement. For example, pursuant to the compliance regime under the Kyoto Protocol, the enforcement branch of the compliance committee may deduct from the non-compliant party's assigned amount for the second commitment period an amount equal to 1.3 times the amount in tonnes of excess emissions; or may suspend the eligibility of the party to make transfers under the emissions trading mechanism.

With regard to the procedure, it is well established that a party concerned is entitled to participate in the consideration by compliance committees, but is not allowed to take part in the deliberation and adoption of any reports or recommendations. While proceedings of the early compliance regimes were closed, proceedings of more recently established regimes are open under certain conditions. For example, the compliance procedures under the Aarhus Convention, the Espoo Convention and the Kyoto Protocol are, as a starting point, open. Committees may request further information on matters under their consideration and may receive further information from different sources. Committees might also undertake information gather-

[20] See paragraph 5(d) of Decision 10/CP.4 on multilateral consultative process contained in the Report of the Conference of the Parties on its Fourth Session, held at Buenos Aires from 2 to 14 November 1998, UN Doc. FCCC/CP/1998/16/Add.1 at 44.

ing in the territory of a party concerned at the invitation of that party. Additionally, committees may adopt more detailed rules of procedure for the compliance mechanisms. This has already been done for some mechanisms; for example, the Kyoto and Aarhus mechanisms.

The task of most of the compliance committees is to produce recommendations and reports to conferences or to the parties to which they are answerable. Upon consideration of reports and any recommendations of committees, conferences of parties may decide upon measures to bring full compliance or reach a constructive solution. Some committees, like the Aarhus committee, can adopt particular measures pending the consideration of the conference of the parties subject to agreement with the party concerned. One exception is the compliance committee under the Kyoto Protocol which has far-reaching powers to decide on compliance matters independently. It is only on due process grounds in relation to the emission reduction commitment that a party concerned may appeal to the conference of parties. Otherwise, the committee decides issues independently. The main reason for making provision for such powers was the desire to ensure the functionality of the market-based Kyoto mechanisms and to shield the committee's work from political interference.[21]

3. Practice

The implementation committee under the Montreal Protocol[22] already has a long record of dealing with concrete compliance issues related to data reporting and controlled measures.[23] Even though the mandate of the committee is rather short and simple, the committee has developed customary practices to address non-compliance issues. For example, the committee has innovatively developed the concept of a compliance action plan as an effective management tool. Another successful innovation has been the establishment of a link between financing and compliance.[24]

Turning to the practice under the Long-range Transboundary Air Pollution Convention,[25] it can be noted that by the end of 2006 the implementation commit

[21] Farhana Yamin and Joanna Depledge, *The International Climate Change Regime. A Guide to Rules, Institutions and Procedures* (Cambridge University Press, 2004) at 395.

[22] See *supra* note 4. See reports of the Implementation Committee under the Non-Compliance Procedure for the Montreal Protocol, available at <http://ozone.unep.org/Meeting_Documents/impcom/impcom_reports_index.shtml> (visited 30 May 2007).

[23] See *Handbook for the Montreal Protocol on Substances that Deplete the Ozone Layer*, (UNEP, 7th ed. 2006) at 199-303.

[24] For discussion on the practice of the implementation committee, see Gilbert M. Bankobeza, *Ozone Protection: the International Legal Regime* (Eleven International Publishing, 2005) at 218-301; K. Madhava Sarma, 'Compliance with the Multilateral Environmental Agreements to Protect the Ozone Layer' in Beyerlin et al. (eds), *Ensuring Compliance with Multilateral Environmental Agreements*, supra note 2, at 25-38.

[25] See Tuomas Kuokkanen, 'The Convention on Long-Range Transboundary Air Pollution' in Geir Ulfstein (ed.), *Making Treaties Work. Human Rights, Environment and Arms Control* (Cambridge University Press, 2007) 161-178.

tee had considered a total of twelve individual submissions and referrals relating to compliance by individual parties with substantive obligations. Five were self-submissions and seven were referrals by the secretariat. In eight of the twelve cases, the Committee, and subsequently the Executive Body, concluded that there had been non-compliance: namely, in the cases of Norway, Finland, Italy, Greece, Ireland, Spain (twice), Slovenia and Denmark. To date,[26] of the twelve parties in respect of which individual proceedings have been commenced, the Executive Body has decided in three instances to close the proceedings. While Finland, Italy, Ireland and Slovenia achieved compliance;[27] in the cases of Sweden, Luxembourg and Iceland it was eventually established that they had been in compliance all along.[28] With regard to other pending cases, it is envisaged that Norway will achieve compliance quite soon; while the two Spanish cases, the Greece case and the Danish case will continue for several years.[29]

In most of the twelve cases, the parties have identified one or more sectors that have been particularly problematic for them. For instance, the main reasons for the failure by Norway to reduce its VOC emissions, in accordance with the 1991 VOC Protocol, were the technical difficulty of controlling emissions of VOCs in the offshore oil sector and the consequent delay in developing the necessary technologies to control such emissions. In Ireland, the extraordinary economic growth of the 1990s caused an unexpectedly large increase in its VOC emissions. In addition, the 'fuel tourism' between Northern Ireland and the Republic increased Ireland's emissions. In Finland, emission reductions in the road transport sector – the largest source of VOC emissions – had fallen below expectations due to the economic recession at the beginning of the 1990s. As a consequence, the renewal of its vehicle fleet was slower than anticipated. The mobile source sector was one of the principal causes of Italy's, Greece's and Spain's difficulties as well. Higher emissions of polycyclic aromatic hydrocarbons (PAHs) in Denmark resulted from increased burning of wood. Thus, the attempt to reduce greenhouse gases by wood-burning caused another environmental problem. One common problem in many of the referrals and submissions has been the uncertainty, and/or inaccuracy, of national data.

The compliance committee under the Aarhus Convention has received a number of communications and one submission by one party against another party.[30] In May 2005 the second meeting of the parties of the Convention, held in Almaty, adopted four decisions regarding non-compliance: two with regard to Kazakhstan; and one

[26] March 2007.
[27] EB decisions 2003/2, 2005/3, 2005/5 and 2006/3.
[28] EB decisions 2003/4, 2004/11 and 2006/9.
[29] The Ninth Report of the Implementation Committee, Doc. EB.AIR/2006/3, 3 October 2006, paras 13-31.
[30] For discussion, see e.g. Veit Koester, 'The Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters (Aarhus Convention) in Geir Ulfstein (ed.), *Making Treaties Work,*, *supra* note 25, at 179-217.

each with regard to Ukraine and Turkmenistan.[31] The decision concerning Ukraine was based on a submission by Romania.[32] The committee has determined a few communications inadmissible and therefore it has not considered them.[33] There are also several communications pending in the committee.[34]

In the Biosafety[35] and Basel[36] compliance committees, there have not yet been any cases. In the Espoo compliance regime one expects that in the near future the committee will deal with the submission by Romania against Ukraine. The submission relates in broad terms to the same matter that the compliance committee under the Aarhus Convention has already dealt with. In addition, a special inquiry procedure under the Espoo Convention was carried out in relation to the same dispute.

With regard to the compliance mechanism under the Kyoto Protocol, the committee has so far received one submission. The bureau of the committee allocated the submission to the facilitative branch of the committee. However, the branch failed to adopt either a decision to proceed or a decision not to proceed by a majority of three-fourths of the members present and voting; except that it decided not to proceed against Latvia and Slovenia.[37]

Due process requirements are generally taken into account in the consideration of submissions by compliance committees. A party in respect of which a submission or referral is made is entitled to participate in the consideration by committees of that submission; but may not take part in the preparation and adoption of any report or recommendations. Moreover, committees have in the case of all submissions sought to establish an active and meaningful dialogue with the party concerned.

One can identify different elements in the recommendations of committees and the related decisions of the conferences of the parties in those cases where non-compliance has been established. First, there has been a conclusion of non-compliance. Second, the party concerned has been urged to fulfil its obligations as soon as possible. Third, the party has been requested to provide a periodic progress report to the committee. Depending on the circumstances, committees have used different nuances of language in their reports. For instance, their recommendations 'express

[31] Report of the Second Meeting of the Parties to the Aarhus Convention, UN Doc. ECE/MP.PP/2005/2, Kazakhstan decisions II/5 a, Ukraine decision II 5/b and Turkmenistan decision II/5c, available at <http://www.unece.org/env/pp/compliance> (visited 30 May 2007).

[32] Ukraine decision II/5b, *supra* note 28.

[33] See Poland (Doc. ACCC/C/2004/7), Armenia (Doc. ACCC/C/2004), Kazakhstan (Doc. ACCC/C/2004/10), Poland (Doc. ACCC/C/2005/11), available at <http://www.unece.org/env/pp/compliance> (visited 30 May 2007).

[34] See Albania (Doc. ACCC/C/2005/12), Romania (Doc. ACCC/C/2005/15), Lithuania (Doc. ACCC/C/2005/16) and European Community (Doc. ACCC/C/2005/17), available at <http://www.unece.org/env/pp/compliance> (visited 30 May 2007).

[35] *Supra* note 5.

[36] *Supra* note 6.

[37] Annual report of the Compliance Committee to the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol, UN Doc. FCCC/KP/CMP/2006/6, paras 19-24.

disappointment', 'note with concern', 'remain concerned', 'urge' or 'strongly urge' in order to increase gradually the pressure on parties in breach. Usually, each party found in breach is called on to report by a specified date on the steps it has taken to achieve compliance, to set out a timetable that specifies the year by which it expects to be in compliance, and to list the specific measures taken, or scheduled to be taken, to fulfil its obligations. The purpose of such requirements is to place pressure on the parties in question to bring about full compliance as quickly as possible.

4. Conclusion

In light of the above, it appears that most of the multilateral environmental agreements have either established a compliance mechanism or are currently negotiating to do so. While the mandates of early compliance mechanisms were quite simple and straight-forward, the more recent mandates have become lengthy and detailed. Compliance mechanisms are usually praised, but occasionally one can hear critical voices suggesting that compliance negotiations have turned into an exceedingly complex business. As such negotiations drag on, it is asked what the added value of compliance regimes is; particularly if they are reduced, through political compromises, to regimes without any teeth. It might not really be worthwhile, critics point out, to establish merely symbolic mechanisms and thereby add unnecessary bureaucracy to already complex environmental regimes; while, at the same time, some governments are arguing for good governance and synergies. Those who look on compliance regimes favourably admit, as a response, that recent compliance negotiations are more lengthy and complex. This is, according to such approving commentators, merely a sign of more sophisticated machinery; and a logical consequence of more knowledge and experiences being gained in compliance matters. Indeed, the more recent compliance regimes tend to codify in their mandates customary practices which the existing regimes have developed through their practical experiences. Be that as it may, it appears that it is no longer sufficient routinely to establish new compliance mechanisms simply by copying existing models without serious consideration as to whether they can bring any added value or not. The ongoing negotiations under the Stockholm Convention[38] and the Rotterdam Convention[39] are, in this regard, a critical test of the faith of environmental negotiators in compliance regimes.

So far, the compliance mechanism mechanisms under the Montreal Protocol,[40] CITES[41] and the LRTAP Convention[42] have gained experience in handling individual cases. Through innovative means and persistent pressure they have managed to bring added value to their regimes. The committees and conferences of parties have

[38] *Supra* note 15.
[39] *Supra* note 14.
[40] *Supra* note 4.
[41] *Supra* note 2.
[42] *Supra* note 8.

laid great emphasis on timetables in order to bring about full compliance as soon as possible. Moreover, they have striven to provide practical suggestions to facilitate implementation. However, there are some compliance mechanisms that have been in existence for a number of years already, but which still lack actual cases. This is true, for instance, with regard to the Basel Convention and the Cartagena Protocol. For that reason they can be regarded as unworkable. At the same time, however, their mere existence might be considered to serve already as a deterrent. With regard to other regimes, it appears that the effectiveness of the compliance mechanisms under the Kyoto Protocol and the Aarhus Convention, in particular, in the coming years will be an important test for compliance mechanisms in general.

There have been no conflicts with traditional principles and procedures of international law as the new mechanisms have complemented, and have served without prejudicing, such traditional means. Through these managerial solutions, compliance mechanisms have brought added value and gained respect under those regimes. Nevertheless, it is still early days for the compliance regimes. Their success depends very much on the tailor-made design of their mandate, skilful management and recognition by parties of their added value.

PART II

SPECIAL THEME: GENERAL ISSUES OF BIODIVERSITY

Biodiversity: an Overview of Current Issues

Michelle Hamer [1]

1. Introduction

Biodiversity is a term which, simply stated, refers to the number, variety and variability of living organisms.[2] Biodiversity has been defined more comprehensively as:

> '[t]he variety 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.'[3]

The Convention on Biological Diversity (CBD) was signed by 150 nations in 1992 at the United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro. The objectives of the CBD are stated as being:

> '[t]he conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of its genetic resources'.[4]

Since the establishment of the CBD, over 14 years ago, the value of biodiversity and the need for its conservation have been broadly accepted in scientific and conservationist circles. However, the problems associated with the loss of biodiversity have not been solved; and in most regions of the world the threats have continued or even increased. For example, most of the major forest across the globe continues to be lost

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[2] B. Groombridge (ed.), *Global Biodiversity* (Chapman & Hall, 1992).

[3] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, Article 2.

[4] Article 1 of the CBD.

at rates of 0.5 to 3% a year.[5] The issues surrounding the conservation and sustainable use of biodiversity have changed focus as a better understanding of threats and biodiversity processes have developed; but, in general, this has not led to a reduction in threats. The aim of this paper is to provide a brief overview of the current major issues surrounding biodiversity and its conservation.

2. Understanding biodiversity

While biodiversity has been defined in many publications, and the term is widely used, the complexity represented by this term is generally poorly understood. Many, both members of the general public and decision-makers, perceive biodiversity as the conservation, by conservation practitioners and scientists, of nature, mainly represented by large mammals, in protected areas. The need for the protection of biodiversity even outside of protected areas and in all parts of the world, with the participation and acceptance of responsibility of all individuals, organizations, companies, industries and levels of government is not acknowledged.

The extreme diversity of life present on Earth and our lack of knowledge of this diversity are often underestimated. Approximately 1.75 million species have been documented and described by scientists,[6] but another 3 to 100 million are estimated to still be discovered and described.[7] These include species of plants, animals, fungi and microorganisms (bacteria and viruses), but the majority of the unknown species belong to the latter groups and the invertebrates such as insects. A major limitation to addressing this lack of knowledge is that the number of specialist scientists with the knowledge and expertise to carry out the process of species description and identification is aging and declining globally with few young scientists entering the field.[8] At the level of genetic diversity, variation between and within populations of each species, knowledge exists only for a select group of organisms – generally those of economic or medical value – and while capacity is more readily available, this field of research is expensive.

The complex interactions between individual organisms, populations, communities and ecosystems and the interdependence of these components is seldom appreciated; neither is the fact that scientists have only limited knowledge of these aspects of biodiversity. Without knowledge about species, their genetic diversity and the interactions that maintain ecosystems and their components; it is difficult to protect them, or to predict the effect of any changes brought about by humans on the survival of biodiversity. Biodiversity is the result of 3.5-4 billion years of evolution[9]

[5] A. S. Pullin, *Conservation Biology* (Cambridge University Press, 2002) at 67–68.
[6] N. Eldredge, *Life in the Balance: Humanity and the Biodiversity Crisis* (Princeton University Press, 1998) at vii.
[7] E. O. Wilson, 'Vanishing Before Our Eyes', *Time*, April/May 2000.
[8] H. C. J. Godfray, 'Challenges for taxonomy', 417 *Nature* (2002) 17–19.
[9] K. J. Gaston & J. I. Spicer, *Biodiversity, An Introduction* (Blackwell Publishing, 2004) at 22.

– we have been attempting to understand this result scientifically for only about 300 years.

3. The biodiversity crisis

Extinction is the permanent loss of a species from the earth. Throughout the history of life on earth species have often become extinct, and there have been at least five mass extinction periods when a large proportion of species have been lost. The last of these occurred 65 million years ago with the extinction of the entire dinosaur fauna. We are currently experiencing what scientists have termed 'the Sixth Extinction'.[10] There are, however, major differences between this and previous mass extinctions. The rate of extinction is currently 100 to 1000 times greater than before humanity.[11] Before humanity, mass extinctions were followed by mass evolution of new species which filled the niches opened up by extinct species. After about five million years the full variety of life was once again reached. Now, however, rapid destruction of habitats means that new species do not evolve because the rate of change of habitats is too fast and the type of habitats resulting after transformation by people are generally unsuitable for the evolution of species.

The fact of extinction of most mammal or bird species is recorded and acknowledged. We know that 844 plant and animal species have become extinct in the last 500 years, and estimate that the rate of species extinction is now 100 to 1000 times as great as it was before humanity.[12] Most of these are, however, small and obscure invertebrates, fungi, single-celled organisms or plants, and their loss goes undocumented. The question posed by many decision-makers and the public in general, is: why is there a need for concern at the loss of these species, if we do not even know of their existence and we do not see any consequence of their loss? Scientists, because of their lack of real predictive understanding of biodiversity, are unable to provide convincing answers to this question, but generally promote the use of a precautionary approach. The Precautionary Principle states that damages done to the natural world should be avoided in advance, even if these damages cannot be scientifically predicted. The Precautionary Principle is essentially a strategy to deal with scientific uncertainties in management and assessment of risks.[13] The most persuasive arguments for the conservation of biodiversity are those relating to the role of biodiversity in human survival.

[10] Eldredge, *Life in the Balance, supra* note 6, at ix.
[11] Wilson, 'Vanishing Before Our Eyes' *supra* note 7.
[12] *Ibid*.
[13] UNESCO World Commission on the Ethics of Scientific Knowledge and Technology, The Precautionary Principle, available at <http://unesdoc.unesco.org/images/0013/001395/139578e.pdf> (visited 16 May 2007).

4. The uses of biodiversity

The total dependence of humans on biodiversity for our survival is frequently discussed. For example, the oxygen we need for all our physiological processes is only produced and replenished during photosynthesis by green plants and some microbes such as microscopic, marine algae. Plants also filter noxious gases from the air, including the carbon dioxide waste we breathe out.[14] Direct benefits of biodiversity are those relating to consumptive use – biodiversity provides food, timber, materials for clothing and medicines. The Madagascar periwinkle, a wildflower, has provided an effective drug against two forms of childhood leukemia, while a compound extracted from the bark of the Pacific Yew is used to fight ovarian cancer. These are just some of a very large number of medicines provided by biodiversity.[15] Biological resources have also been the source of many industrial materials such as resins, dyes, rubber, oils, waxes, pesticides and perfumes. Indirect benefits are those relating to the services provided by biodiversity – fertile soils, clean water, oxygen, pollination of crops – it has been estimated that 15–30% of the diet in the USA is a result of animal-mediated pollination,[16] pest control, and waste removal. In the USA alone, the 9000kg of waste produced by each of the 100 million head of cattle is disposed of by insects, particularly dung beetles, which return considerable amounts of nutrients from dung to the soil.[17] Biodiversity also provides direct economic benefits through activities such as ecotourism and hunting. The actual economic benefits provided by biodiversity to humans are almost impossible to quantify since most of them are irreplaceable.

Loss of species from ecosystems can be tolerated until losses reach a certain threshold, beyond which the services are compromised and eventually cease. Individual species have potential for use as foods or medicines. Bioprospecting is a rapidly developing field in which the potential of plants and animals is investigated in the search for cures for all sort of ailments and for new genes for improving existing crops or for establishing new sources of food. Some conservationists include ethical, aesthetic, cultural and psychological reasons for biodiversity conservation;[18] but these are seldom strong enough arguments to prevent the destruction of habitats for short-term financial gain.

If humanity is so dependent on biodiversity, why is there an ongoing and increasing biodiversity crisis globally? While there may be recognition of the role of biodiversity in our survival, there may be a perception that technological advances will

[14] Eldredge, *Life in the Balance, supra* note 10, at 158–159.
[15] *Ibid*. at 155.
[16] *Ibid*. at 155.
[17] J. E. Loxy and M. Vaughan, 'The economic value of ecological services provided by insects', 56 *BioScience* (2006), 311-323.
[18] P. R. Ehrlich and E.O. Wilson, 'Biodiversity studies: science and policy', 253 *Science* (1991) 758–762; N. Eldredge, *Life in the Balance: Humanity and the Biodiversity Crisis* (Princeton University Press, 1998) at 165–166.

address any problems created by the loss of biodiversity. While technological developments may be able to imitate natural processes to some extent, they are unlikely – in the time available – to operate on the same scale at which biodiversity delivers its services. For example, the Biosphere 2 experiments set up artificial, closed-environment, facilities anticipated to sustain eight humans for a two-year period. These cost over US$200 million to establish and many millions more to maintain, but the experiment failed because of dramatic changes in the gaseous make up inside the domes, the collapse of the water systems because of pollutants, and the extinction of all pollinators. This clearly illustrated that even with enormous technology and resources, a system to sustain even eight people could not be developed.[19] Technologies such as genetically modified organisms (GMOs) can provide new food sources and medicines; but the uncertainty surrounding the long-term effects of these on the environment, human health and economies mean that they are not widely accepted as alternatives to natural species. Additional reasons for the ongoing loss of biodiversity relate to poor understanding of those factors that contribute to the biodiversity crisis.

5. Threats to biodiversity

Human activities are directly responsible for the biodiversity crisis. These activities have had negative impacts on biodiversity for thousands of years; and documented evidence of the collapse of ecosystems, and consequently, human populations, do exist.[20] Overexploitation of natural resources such as timber, and through overgrazing have forever changed landscapes. Clearing of natural habitats for planting crops and to establish human settlements, overgrazing by livestock, and hunting have contributed to the loss of biodiversity for thousands of years. Desertification has resulted from human activities in many parts of the world, and continues to be a threat to biodiversity and people. The industrial age has added to the list of threats and exacerbated those already existing. Linked to both agricultural and industrial development have been the rapid and exponential increase in the world's human population and the increase in the standard of living of people in the developed world. These factors contribute to a continuing and escalating increase in demand on the Earth's natural resources, which increase scientists are adamant is unsustainable. A recent approach is to measure the 'Ecological Footprint' of the human population. Today, humanity's 'Ecological Footprint' is over 23% larger than that which the planet can regenerate. In other words, it now takes more than one year and two months for the Earth to regenerate what we use in a single year. We maintain this overshoot by liquidating the planet's ecological resources. This is a vastly underestimated threat and one that is not being adequately addresse.[21]

[19] K. J. Gaston and J. I. Spicer, *Biodiversity, An Introduction* (Blackwell Publishing, 2004) at 100.
[20] Pullin, *Conservation Biology*, *supra* note 5, at 53–64.
[21] Global Footprint Network, Ecological Footprint: overview, available at <http://www.footprintnetwork.org/gfn_sub.php?content=footpirnt_overview> (visited 27 November 2006).

5.1 Direct impacts

Currently, the loss of biodiversity can be categorized in different ways. A direct cause of extinction is overexploitation of an animal or plant species. This type of threat has lead to the extinction of many animal species, especially those on islands. These include the well-known example of the Dodo from Maurititius. The fishing industry, including whaling, has led to the near-extinction of many species; the poaching of black rhino in Africa (has) reduced populations from 65 000 to less than 2400 between 1965 and 1988; and the pet trade currently threatens many species of parrot, primate, and reptile. Illegal trade in rare plants harvested from the wild has also placed many species on the threatened list. Many threatened species are protected *ex situ*, out of their normal habitat in zoos, gardens or conservation breeding centres. This may protect the species, but does little for the rest of the ecosystem. Lowered populations or the loss of a particular species from an ecosystem often has impacts on other species; especially in cases where the species is considered a 'keystone species' in a particular habitat or ecosystem. This is often referred to as an 'extinction cascade'. The loss of such species has a profound effect on the entire ecosystem, often causing it to become dysfunctional and eventually collapse. For example, the loss of a predator can result in population explosions of a particular prey species; which then results in increased competition with other species which may become threatened.

5.2 Unsustainable use

Linked to the use of particular species for food, medicines, the pet or ornamental plant trade, or for building materials, is the concept of sustainable use; a term widely used but often poorly understood. Sustainable use has different meanings for people from different disciplines and the biological problems associated with understanding what level of harvesting is really sustainable is not always understood by economists. In terms of conservation, the concept means 'the use of species or natural communities in ways that ensure they will remain in a "healthy state" and be available for use by future generations'.[22] For an economist, sustainable use may mean providing healthy profits which can be invested elsewhere to provide an income, rather than the long-term persistence of the natural resource. Unsustainable use occurs when a species is harvested at a greater rate than its population grows. While the population growth of a species can be predicted using models, natural population dips can occur which may be linked to unpredicted weather episodes; or even be inexplicable. When combined with harvesting, these dips can result in population crashes. Another problem is associated with equitable sharing of the profits made through harvesting. The more profit that is made, the more people there will be who want a share of the profits. As the abundance of the target species decreases, so the price will increase; resulting in increased pressure for harvesting and often illegal harvesting.

[22] Pullin, Conservation Biology, *supra* note 5, at 124.

The fishing industry provides many examples of the over exploitation of a natural resource, leading to the collapse of many fish stocks.

5.3 Habitat destruction

Threats (to biodiversity) on a larger scale are usually caused by the destruction of habitats through extensive agriculture in the form of monocultures, industrial or urban development, the development of roads or water impoundments such as dams and other infrastructure. It is often argued that some habitat will be left intact to protect species, but this is seldom a solution because of biological constraints. The remaining areas are often small, resulting in populations being subjected to a high risk of extinction. Small populations are vulnerable to extinction through loss of genetic variability and inbreeding depression, an increased risk of environmental catastrophes causing extinction, and various environmental changes as a result of the reduced area of the habitat (edge effects). It is often seen as acceptable to lose one area, because several similar habitats still exist. However, these are often small and fragmented, and separated by completely altered habitats; which prevents dispersal of plants or animals between remaining habitat patches.

5.4 Habitat disturbance

Habitat disturbance or degradation is less immediate and obvious than is complete habitat loss, but its effect is equally damaging to biodiversity. The term disturbance was defined by Pullin[23] as the alteration of the natural dynamics of systems; and he includes chemical pollutants, including pesticides and acid rain, introduced plant and animal species, diseases and genes as agents of disturbance. Disturbance could also be in the form of harvesting, such as timber extraction from forests or savanna, small-scale farming, litter, fires, trampling by livestock or humans and many other activities.

5.5 Genetically modified organisms

Pullin also includes GMOs as a 'potential threat to biodiversity that is as yet undetermined'.[24] There is much controversy over GMOs, with both positive and negative impacts on biodiversity being raised; but environmentalists are concerned about long-term effects. The gene which is inserted into crops often reduces the susceptibility of the crop to insects. Pollen from GMO crops could be introduced to other plants which could have an impact on beneficial insects such as pollinators. Another concern is the insertion of a gene which removes the susceptibility of a crop to the use of herbicides, which is done to make control of weeds amongst crops easier. If the gene becomes spread to other plants through cross pollination, these plants

[23] *Ibid.*
[24] *Ibid.* at 120-121.

could become widespread and uncontrollable - 'superweeds' - and could have impacts on natural species. Positive effects of GMOs may be reduced use of pesticides and the production of higher crop yields which will reduce the amount of land required for monocultures.

5.6 Global climate change

The earth's climate has gone through major cooling and warming cycles over the past four billion years. Scientists have, however, identified more rapid recent changes in climate which they have attributed to the accumulation of various gases including carbon dioxide, methane, and nitrous oxide in the atmosphere. These gases are produced mainly through industry (32%), transportation (14%), agriculture (20%) and through the generation of electricity (20%).[25] Carbon makes up 70% of the gas emissions, and this is produced mainly through the burning of fossil fuels and processes such as deforestation in the tropics. In simple terms, global warming can be explained as follows. Most of the sun's energy that reaches the Earth is absorbed by the oceans and land masses and radiated back into the atmosphere in the form of heat or infrared radiation. Most of this infrared energy is absorbed and reradiated by atmospheric gases such as water vapour and carbon dioxide. This phenomenon, referred to as the greenhouse effect, keeps the earth some 33°C warmer than it would otherwise be. As concentrations of gases that absorb and reradiate infrared energy increase, the warming effect increases.

Global climate change and global warming have become major concerns for biodiversity conservationists. While the extent of this change may seem minor in terms of actual temperature change (0.3 – 0.6ºC since the end of the nineteenth century).[26] the impacts have started and are predicted to be severe over the next 100 years. Melting of the polar ice caps, rising sea levels, changes in rainfall patterns and therefore in vegetation, have all been predicted and some evidence exists that these effects can already be seen. The main problem in terms of biodiversity is that species or natural communities of living organisms are usually adapted to a fairly narrow range of temperatures and require certain habitats for their survival. Global climate change means that conditions in existing environments will not allow species to survive. Thus global warming has been blamed for coral bleaching, which is essentially the death of the corals and many of the marine species that depend on them. While many species are mobile, and could escape to higher altitudes where temperatures are lower and conditions may be suitable for survival, their routes are often transformed and hostile, making the higher altitudes inaccessible, or higher altitude habitats may themselves have been destroyed.

[25] Pew Center on Global Climate Change, <http://> (visited 27 November 2006).
[26] US Global Change Research Information Office, 'Has the world warmed?' <> (visited 27 November 2006).

One hundred and seventy-five countries have ratified the Kyoto Protocol to the United Nations Framework Convention on Climate Change,[27] which came into force in February 2005. These countries are responsible for 61.6% of global emissions. The effectiveness of the Protocol is yet to be seen but climate change appears set to increase in severity. The major contributor to global emissions, the USA, has not ratified the Protocol. China is now the world's second largest emitter of greenhouse gases; and other fast-growing developing countries, such as India and Brazil, are also fast becoming large emitters. Meanwhile, as Catherine Brahic points out, the USA is taking no nationwide action to reduce greenhouse gas emissions; and the European Union Emissions Trading Scheme, created to help EU nations abide by their agreed Kyoto Protocol emissions limits, failed to do so in 2005, in its first year of operation.[28]

In order to achieve their targets, parties are required to put in place domestic policies and measures that might help mitigate climate change and promote sustainable development. In addition, they may offset their emissions by increasing the amount of greenhouse gases removed from the atmosphere by so-called carbon 'sinks' in the land use, land-use change and forestry sector. However, afforestation is supported, and this activity in itself promotes the transformation of natural grasslands into exotic timber crops, threatening the biodiversity of vast areas.

While global climate change certainly provides cause for concern; it has, in many cases, become the scapegoat for environmental changes caused by other factors. For example, drying rivers have been attributed to global climate change, where the real reason is sometimes over extraction of water for agriculture, or other forms of habitat alteration. For example, the St Lucia wetland system in KwaZulu-Natal, South Africa has been declared a World Heritage Site. This system largely dried up during and extended drought period between 2002 and 2005. However, the water levels were more severely impacted than similar systems in the region because the main river flowing into the wetland had most of its swamp areas drained for planting sugar cane in the 1940s, and several artificial channels have been established at different points. These actions altered the silt-removal processes, resulting in massive siltation of the wetland. Some major inlets were destroyed by the removal of large swamp forests surrounding the wetland.[29] In developing countries global climate change can be used to shift focus on habitat destruction to blame a causal factor that is in the hands of the developed world; thereby removing responsibility and accountability for preservation of habitats from developing countries. Perceptions of the impacts of global climate change could lead to an increase in overexploitation of

[27] Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto, 11 December 1997, in force 16 February 2005, 37 *International Legal Materials* (1998) 22.

[28] Catherine Brahic, 'Carbon emissions rising faster than ever', available at <http://www.newscientist.com/channel/earth/climate-change/dn10507-carbon-emissions-rising-faster-than-ever.html> (visited 27 November 2006).

[29] R. Taylor, St Lucia – The Big Picture, unpublished report available at <http://www.kznwildlife.net/PDF/stlucia_bigpicture.pdf> (visited 27 April 2007).

resources; in the belief that these will not persist anyway, because of a factor beyond the control of the resource user.

Given the poor overall global performance in terms of greenhouse gas emissions; it is necessary to protect remaining natural habitats to provide carbon sinks, to provide corridors between low and high altitude areas and to provide potentially more suitable habitats. Rather than increasing neglect, governments at all levels need to increase protection of remaining biodiversity.

6. Protected areas and biodiversity conservation

The CBD encourages signatories to 'establish a system of protected areas or areas where special measures need to be taken to conserve biodiversity' (Art. 8(a)). More than 20.000 protected areas, covering an area of 18.8 million km^2 or 11.5% of the Earth's surface currently exist globally.[30] The perception among many people at all levels of society is that this is adequate to protect the world's biodiversity. There are many problems associated with these areas, however. Many of them are small, with small populations of plants and animals, which makes these vulnerable to extinction. Much of the world's biodiversity (in terms of ecosystems or species) does not occur in existing protected areas. Many protected areas are inadequately protected or managed. Even amongst those that are actively managed, the impacts of interventions may have a negative impact on some components of biodiversity. Controlled and regular burning, for example, may not reflect a natural pattern and may actually threaten species. In protected areas that are fenced, large mammal populations need to be controlled but estimating the 'ideal' population size is not always possible. There have been suggestions that elephant populations in the Kruger National Park, South Africa, are too high and that biodiversity is being negatively impacted upon. A final issue relates to ecosystems and the interdependence of these systems. A protected area does not and cannot survive in isolation from areas outside its boundary. Water flow and rivers, for example, are critical for many ecosystems but over-extraction of water or water pollution outside the protected area will have effects inside the area. Alien plants or animals are often a major problem in protected areas and even when controlled, they will continue to invade because they are uncontrolled outside the protected area.

[30] IUCN, '*Benefits Beyond Boundaries, Proceedings of the 5th World Congress on Natural Parks and Protected Areas*' (IUCN, 2005), available at <http://www.iucn.org/themes/wcpa/> (visited 16 May 2007).

7. Biodiversity conservation: the way forward

There are positive steps, apart from declaring protected areas, that can be taken to stem the biodiversity crisis. While the lack of scientific knowledge and understanding were highlighted early in this paper, research alone cannot conserve biodiversity. Policy and law-makers, decision-makers, industrialists, developers, economists, educationists, and essentially all individuals, will ultimately need to use the information provided by research to ensure that biodiversity survives. Legislation, policies, strategies and action plans for biodiversity conservation have an important role in biodiversity conservation, but unless implemented stringently and rigorously, they have little value. There is debate about the effectiveness of economic incentives for limiting impacts on biodiversity, and some scientists tend rather towards attempting to change peoples' ethics. The tension between development (physical and economic) and biodiversity must find a balance in terms of the level of loss that is acceptable. The cost of the loss must be considered in terms of the region, country or the whole globe; and in terms of services provided and species' potential to contribute to any aspect of human well-being. Education and awareness of the importance of protecting biodiversity, and ways to protect it, amongst the general public are important to allow critical assessment of political or economic decisions and for public pressure relating to biodiversity to carry weight in politics and industry. Essential for any progress to be made in an effort to address the biodiversity crisis is the acceptance of responsibility by all people in protecting biodiversity. Political will is equally important and much responsibility lies on the shoulders of those responsible for the implementation of legislation and policies targeted at protecting biodiversity. It has been suggested that if this is not done, we will lose or have doomed to extinction about a fifth of the world's species by 2020.[31]

[31] Edward O. Wilson, *The Diversity of Life,* (Penguin Books 2001, first published 1992) at 330.

The Negotiating process leading to the Convention on Biological Diversity

Iwona Rummel-Bulska[1]

1. Introduction

The earth's genes, species, and ecosystems are the product of more than 3,000 million years of evolution and are the basis for the survival of our own species. But the available evidence indicates that human activities are now leading to the loss of the planet's biological diversity and as a consequence are eroding the biological resources essential for future development. Given the projected growth in both human population and economic activity, the rate of loss of biodiversity is far more likely to increase than to stabilize.[2]

In describing the treaty negotiations that resulted in the 1992 Biodiversity Convention (CBD),[3] a number of specialized terms will be used. For clarity, these may be defined as follows:

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[1] Principal Legal Officer and Chief, Environmental Law Branch, UNEP; former Executive-Secretary of the Intergovernmental Negotiating Committee of the Convention on Bio-Diversity 1987-1992. This paper is based on the author's personal experience as the Executive Secretary of all negotiating Sessions leading to the adoption of the Convention on Biological Diversity; as well as the main negotiator of the Biodiversity Convention on behalf of UNEP as the Head of the Environmental Law Branch of UNEP; and also Executive Secretary of the Plenipotentiary Conference which, after difficult negotiations, eventually adopted the Convention. Further, the paper is based on UNEP documentation during the negotiations, large parts of these papers being drafted by the author personally, as well as on the book the author wrote regarding Environmental Negotiations, namely: Mostafa K. Tolba and Iwona Rummel-Bulska, *Global Environmental Diplomacy; Negotiating Environmental Agreements for the World, 1973-1992* (MIT, 1998).

[2] Tolba and Rummel-Bulska, *Global Environmental Diplomacy*, *supra* note 1, at 125.

[3] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>.

- 'Ecosystems' are dynamic complexes of plant, animal, and microorganism communities and their nonliving environment, interacting as an ecological unit.
- 'Biological diversity' refers to the variability among living organisms from all sources, including terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part – within and between species and among ecosystems. 'Genetic diversity within species' refers to the variation of genes within species, as expressed, for example in the thousands of traditional rice varieties in Asia. 'Species diversity' refers to the variety of species within a region, measured either as the total number of species present (sometimes called 'species richness') or as a combination of species numbers and distinctiveness ('taxonomic diversity').
- 'Conservation of biological resources' means the preservation, maintenance, sustainable use, recovery, and enhancement of the components of biological diversity. 'Biological resources' include genetic resources, organisms or their parts, populations, or any other biotic component of any ecosystem with actual or potential use or value of humanity.
- '*In situ* conservation' means the conservation of ecosystems and natural habitats and the maintenance and recovery of viable populations of species in their natural surroundings and, in the case of domesticated or cultivated species, in the surroundings in which they have developed their distinctive properties; '*ex situ* conservation' is the conservation of the components of biological diversity outside of their natural habitats.[4]

The past three decades have seen a considerable growth in our understanding of the evolutionary processes that created the biological diversity on Earth today and of the contemporary factors that are leading to its reduction. Trends in that reduction have been inferred and observed in many regions, and the importance of generic conservation has been more and more widely accepted. In addition, the economic status of living natural resources has advanced greatly.

2. Biotechnology

For thousands of years, people have been manipulating the genetic wealth of biodiversity by selecting and breeding crops and livestock to meet their needs. The exploitation of plant and animal resources has been the mainstay of agriculture, forestry, and fisheries activities, from which a vast variety of domesticated animals and plants have emerged. Today, however, new biotechnologies are emerging that permit great increases in the efficiency of traditional breeding programs and that allow the modification of organisms in ways that were impossible using traditional techniques.

[4] Art. 2 of the CBD. See also Tolba and Rummel-Bulska, *Global Environmental Diplomacy*, *supra* note 1, at 125–126.

Some of these new technologies, such as tissue-culture, already have a record of application but the most novel techniques, such as genetic engineering, are only today yielding their first commercial products. Information is gradually accumulating on the economic benefits to be derived from using genetic diversity, showing the relevance of an economic evaluation of the added value of biological resources.

Species richness generally increases in magnitude as we move from the poles to the equator. In one fifteen-hectare area of the Borneo rain forest, for example, approximately 700 species of trees have been identified, equivalent to the total number of tree species in North America. Yet tropical forests home to roughly one-half of our planet's entire biodiversity inventory are being dismembered by as much as seventeen million hectares per year.

Human activity is having catastrophic impacts on biotas, habitats, and entire ecosystems. To destroy a unique habitat means to sentence to death all species that rely on that habitat for survival. But extinction is not simply a matter of overt habitat destruction. Covert, insidious destruction through air and water pollution, acid rain, spiraling toxic wastes, urban expansion, and demographic momentum are reducing the critical margin necessary for the survival of many species.

Overexploitation and the introduction of non-native species into ecosystems are also important causes of extinction. The expected climate change and global warming could have catastrophic impacts on our planet's biological diversity. A recent report submitted to the Intergovernmental Panel on Climate Change[5] stated that global warming could lead to a decrease in net forested areas, as long-standing boreal and other forests face increased mortality; and fire frequency as well as increased soil erosion and nutrient losses.

Biological diversity has always been viewed as a common heritage, like knowledge, in which increased consumption by the few was assumed not to reduce its availability to the others. Such assumptions now appear inadequate. To correct them, clearly delineated economic incentives related to species conservation must be introduced, including a clarification of global conservation needs and costs.

Some of the causes of the decline in biodiversity have already been addressed. The number of protected areas in the world has nearly doubled since the 1970s, and the total land area under protection has increased by more than 60 percent in the same period. Genetic conservation has also been addressed. The International Board for Plant Genetic Resources (IBPGR)[6] was set up in 1984 and has played a significant role in developing strategies for conserving crop genetic resources and the establishment of seed banks. The Food and Agricultural Organization (FAO) has also been active in this field, and the emergence of farmers' rights as a legal counterpart to

[5] See <http://www.ipcc.ch>.
[6] See <http://www.ipgri.cgiar.org>.

breeders' rights has largely grown out of their initiatives. Economic support for the conservation of biodiversity has also been developing. Debt-for-nature trades have

been used in Costa Rica, Ecuador, Bolivia and the Philippines. The Global Environment Facility set up by the World Bank, in cooperation with UNEP and UNDP, includes several hundred million dollars set aside for the conservation of biodiversity. A number of legal instruments have been established. The 1979 Convention on Migratory Species (CMS)[7] provides a certain amount of protection to some very vulnerable members of the land community; and the 1973 Convention on International Trade in Endangered Species (CITES)[8] provides a safety net in respect of trade in some of the world's most endangered species,

3. The Negotiation Process for the Biodiversity Convention

3.1 The Technical working Group on Biodiversity: 1988-1990

The UNEP Governing Council, convinced that there was a need for a global convention to preserve biodiversity, established in 1987 a working group to investigate the desirability and possible form of an umbrella convention to harmonize current activities in the field of biodiversity and to address other areas that might fall under such a convention, filling gaps in current laws. The group met four times: in November 1988 and February, July, and November 1990.

In 1988, in advance of the first meeting of the working group, UNEP convened a meeting of internationally known scientists into the field of biological diversity. The group exchanged views on the meaning of biological diversity and the need to conserve it, actions to be taken and their priorities, the scope of existing conventions, and possible features of a global convention. It was concluded that a global convention would be a powerful catalyst drawing together the efforts of the various sectoral and regional conventions in this field by giving overall shape and strategic direction to the world effort. It was agreed, however, that such a global convention must not be adopted as a substitute for action, or it would blunt and deflect the efforts the world needs. Accordingly, they urged that any convention should be designed to:

- have a sound basis in science;
- be truly comprehensive in scope, covering *in situ* and *ex situ* conservation and the protection of the biosphere from all significant damaging impacts; in harmony with and supplementing existing conventions in this field;

[7] Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 23 June 1979, in force 1 November 1983, 19 *International Legal Materials* (1980) 15, <http://www.cms.int>.

[8] Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington DC, 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, <http://www.cites.org>.

- be practical in defining obligations and goals, leaving the contracting parties the responsibility of achieving them;
- have the commitment of governments to funding at a realistic level;
- provide realistically for the transfer of resources, allowing its implementation by the poorer countries that are also the custodians of much of the biological heritage of the earth; and
- be capable of catalyzing and coordinating the efforts of governments and other agencies under other conventions in this field.

The report of the senior scientists, including some possible elements of a legal instrument, served as the basis for the ensuing discussions and recommendations of the working group. Their conclusions covered only the conservation of biodiversity and made no mention of such issues as access to biological resources or biotechnology, nor of sharing of profits.

3.2 The Technical Working Group: 1988-1990

The first meeting of the working group of experts in biological diversity was attended by experts nominated by the governments of twenty-five countries, eleven developed and fourteen developing, from every region in the world. It was also attended by representatives of a number of intergovernmental and nongovernmental organizations; being the UN Educational, Scientific and Cultural Organization (UNESCO), the FAO, the Secretariats of CITES, RAMSAR (the Wetlands Convention)[9] and the Convention on Migratory Species, as well as the World Conservation Union IUCN and the World Wildlife Fund (WWF).

Negotiations of this Convention were sponsored and lead by UNEP. UNEP outlined five main areas for consideration: the scope of conservation, increased scientific research, economic values, financing and technology transfer to ensure protection of genetic diversity, and access to genetic resources and to relevant technologies. The Executive Director of UNEP drew the attention of the meeting to the issue of access to biological resources; suggesting that the group would have to consider how to use both FAO plant breeders' rights and farmers' rights to promote conservation of biological resources, especially in the global South, as well as the definition of preferential criteria for access by owners of genetic resources to gene banks and to biotechnologically manipulated resources.

At that meeting the working group concluded that existing conservation conventions and other relevant programs were sectoral and did not cover the full range of biological diversity. It was added that the amendment of existing conventions for the purpose of achieving rationalization or consolidation of resources and for ad-

[9] Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 February 1971, in force 21 December 1975, 11 *International Legal Materials* (1972), 963, <http://www.ramsar.org>.

equately meeting the full range of biodiversity at a global level, would be extremely difficult and time-consuming, because the political contexts of the currently existing legal instruments differed, with different adhering parties, clients, and administrative provisions. Amendments to the existing instruments being neither possible nor desirable, it was considered that there was an urgent need for a new international legal instrument and other measures for the conservation of biological diversity.

Following this meeting the UNEP Governing Council re-emphasized the need to conserve biological diversity on Earth through the implementation of existing legal instruments and agreements in a coordinated and effective way; and the adoption of a further appropriate international legal instrument, possibly in the form of a framework convention. The Governing Council also requested the Executive Director to convene additional working sessions of the group to consider the technical content within the broad socioeconomic context of a suitable new international legal instrument and other measures that might be adopted for the conservation of the biological diversity of the planet. The Council further requested expedition of the work of the group; with the aim of having the proposed new international legal instrument ready for adoption as soon as possible. There still had been no reference to provisions for access to biological resources or to technology, including biotechnology.

The second meeting of the working group, in February 1990, was attended by forty-one countries, twenty-three of them being developing countries: a more than 60 per cent increase over the first meeting. Opening the meeting, the UNEP Executive Director reiterated the need for a global effort in which developed and developing countries infused a new spirit of cooperation into the North-South dialogue; with the conservation of biological diversity as a fundamental element of environmentally sound and sustainable development. He outlined basic issues to which attention ought to be given in order to develop recommendations on how to deal with them in the proposed new international legal instrument on biological diversity: the nature of the international legal instrument, global conservation needs and costs, financing mechanisms, preferential treatment for those having control over genetic resources with respect to gene banks containing them and to essential newly developed varieties obtained through breeding them, and international transfer and favorable access to biotechnology that could be usefully applied or adapted to developing countries' needs. This last issue was the first reference made in these meetings to technology and biotechnology – any new international agreement should not infringe on the sovereignty of nation states over their natural resources; but must protect the interest of the states in which the resources are located, and provide incentives for conservation of biological diversity without inhibiting growth or sustainable development.

The second meeting of the working group made significant progress on a number of basic issues, discussing all of the above points and identifying areas of basic conservation and utilization needs, as well as the need and scope of financing that would lead to measures for implementation and funding through the adoption of a new legal

instrument on biological diversity. The group concluded that the instrument should aim to incorporate concrete and action-oriented measures for the conservation and sustainable use of biological diversity, and requested for commissioning of several studies as a means of responding to specific issues in the process of developing the new legal instrument. These studies covered global biodiversity conservation needs and costs; current multilateral bilateral, and national financial support mechanisms for conservation of biological diversity; an analysis of possible financial mechanisms; access to genetic resources and biotechnology; and biotechnology issues.

The results of the studies were presented to the working group at its third session, in July 1990. The goal was to consider negotiation issues in sufficient detail to begin drafting the legal instrument. UNEP stressed the need for gene-rich developing countries to work in tandem with technology-rich developed countries as the basis for an arrangement that would benefit both North and South, who would receive mutual benefits from cooperation for the conservation and sustainable utilization of the planet's biological diversity. UNEP further outlined five main areas that needed to be reviewed in order to establish their technical feasibility: conservation costs; financial modalities; technology transfer, especially biotechnology transfer; draft elements for the proposed convention; and the relationship between the proposed convention and existing global and regional conventions, agreements, and action plans on biological diversity.

This third meeting was attended by 78 countries, more than three times the number that attended the first meeting and almost double the number at the second, a clear indication of the interest which governments were beginning to take in the subject. The UNEP Executive Director's note to the third meeting called attention to a number of issues, firstly pointing out that a new international legal instrument on biological diversity, in the form of a framework convention, should be comprehensive in scope, covering the full range of biological diversity at the intraspecies, interspecies, and ecosystem levels and addressing both *in situ* and *ex situ* conservation and protection of biological diversity from all significant damaging impacts. It should further be in harmony with, coordinate, catalyze and supplement the efforts of governments and other agencies under existing agreements in this field; and it should contain as much technical, financial, and administrative information as possible, with a commitment for implementation.

It was evident, according to the Executive Director, that a political commitment to identify a specific financial mechanism or fund was essential for the success of the planned legal instrument and the global cooperation needed to conserve the biological diversity of the planet. Such a mechanism or fund should realistically provide for a transfer of resources to enable the poorer countries to abide by the convention. These nations are the owners and custodians of most of the biological resources constituting the biodiversity of the Earth, and the lack of complete information on the likely total cost of meeting the needs of global conservation of biological diversity

should not delay the creation of a financial mechanism or become an obstacle to reaching a decision on such a mechanism. The convention should stipulate that such a mechanism must operate under the authority of the contracting parties, combining funding and clearinghouse functions, dealing with the design and implementation of biological diversity conservation activities and facilitating the transfer and development of relevant technologies. The working group was invited to consider different options on how to administer such a mechanism or fund and which organization to entrust with the lead role.

The implementation of programs approved by the parties should be a cooperative responsibility of a number of bodies, for example the FAO, UNESCO, UNEP, IUCN, and WWF. The contracting parties would assign responsibilities and allocate funds among the participating organizations, and the secretariat of the convention would facilitate cooperation between the organizations and prepare proposals for submission to the parties. The convention ought also to identify mechanisms to permit access to genetic resources and relevant biotechnology techniques, processes, and products, while protecting the sovereign rights of states concerning their natural resources and the legitimate interests of biotechnology inventors.

UNEP considered it to be essential that the planned legal instrument provide a link with existing conventions, agreements, and action plans relating to the conservation of biological diversity, benefiting from the experience of existing bodies. To this end, there should be an exchange of information and documentation; standardization of formats for reporting to and from contracting parties; regular preparation of an overview report of activities carried out under existing instruments are similar or closely linked.

UNEP underlined that the growing number of processes to which biotechnology could be applied to satisfy human needs and aspirations for sustainable development made it an area of global interest. The socioeconomic and environmental impacts of biotechnology require thorough investigation, and any applications contemplated must take into account risks as well as benefits. It was stressed that in order to balance socioeconomic and environmental risks associated with the application of biotechnology and to ensure its prudent management, mechanisms are required to facilitate the development, transfer, and application of modern biotechnology to solve the problems of particular concern to developing countries; to establish effective cooperation with reciprocal benefits between biotechnology-rich developed countries; and gene-rich developing countries; and to anticipate the possible negative impacts of biotechnology and develop appropriate national and international regulatory measures. Access to genetic resources and biotechnology inevitably involves the problem of intellectual property rights. The legal instrument would address only the technologies that would improve the conservation, rational use, and sustainable development of biological diversity.

It became clear that the following major issues needed clear definition: the objectives of a convention on biological diversity; the legal status of biological diversity as a basis for subsequent rights and obligations of states; state sovereignty over the elements of biological diversity; equitable sharing of costs and benefits deriving from conservation and use of biological diversity; access to *in situ* and *ex situ* biological resources and to relevant technologies; the compatibility of biological diversity conservation and sustainable development; the role of the range of existing legal instruments on various aspects of biological diversity; the special needs and interests of developing countries; and financial and institutional mechanisms to provide for the equitable cooperation of various groups of countries.

During the meeting the working group had to take into consideration not only the note by UNEP outlined above, but also a number of studies presented by subcommittees and a presentation of suggested elements for a global framework convention that had been prepared by UNEP in collaboration with representatives of some other members of the Ecosystems Conservation Group[10] (FAO, UNESCO, IUCN and WWF).

Regarding financial arrangements, the working group agreed that uncertainties about the total cost of the project should not delay development of the new legal instrument. More accurate country information would help refine these estimates; taking into consideration the full range of biological diversity and ecosystems, not only those found in tropical ecosystems, and the costs of technology transfer as well as of finding alternatives to activities that threaten biological diversity and sustainable development. Although governments were already investing considerable sums in national conservation activities and multilateral and bilateral donor agencies were contributing to conservation of biological diversity, these interventions were inadequate to meet in a timely and satisfactory manner the basic conservation needs identified by the working group; neither should the additional funds required for developing countries to achieve conservation of biological diversity be diverted from current development programs. The Global Environment could be considered as an element of a funding mechanism. Contributions might be provided by the parties as an assessment based on the industrial and commercial exploitation of, or trade in, genetic resources. The delegates agreed that a pilot financial mechanism was needed pending a better understanding of the costs and benefits of the program. It should combine funding and clearinghouse mechanisms, including support to priority conservation needs identified by the working group at its second session; and it should be under the supervision of the contracting parties, who would closely coordinate with existing funding institutions. Furthermore, the delegates affirmed that 'free access' to biological diversity or biotechnology does not mean 'access free of charge'.

[10] On Ecosystems Conservation Group, see <http://www.unep.org/Documents.Multilingual/Default.asp?DocumentID=43&ArticleID=204&l=en (visited 30 May 2007).

The working group also took up the issue of biotechnology transfer, an important element of the planned legal instrument with the potential to contribute to improved conservation and sustainable utilization of genetic diversity. However, because of the complexity of the issue, it was difficult for the group to reach firm conclusions at that third session on how and to what extent the biotechnology issue should be addressed in the convention; and it was agreed that the idea of establishing an information clearinghouse for required biotechnologies, as proposed in UNEP's statement, needed to be re-examined at the next meeting of the technical working group.

The working group urged that its concerns on the close relationship between access to genetic resources and biotechnology be brought to appropriate *fora*, such as GATT[11] or the World Intellectual Property organization (WIPO), to sensitize those groups to issues related to biological diversity. It was considered important that states bear in mind issues related to conservation and sustainable use of genetic resources when dealing with intellectual property rights issues in *fora* where these are currently being dealt with. Moreover, the potential value of natural resources should be recognized, and owners should receive appropriate compensation; while a balance should be struck between the legitimate rights of germ plasm owners and technology owners, recognizing the needs of other parties.

The general agreement reached during the three meetings of the technical working group was that:

- an international legal instrument without firm commitments to funding would be meaningless;
- those who enjoy the greatest economic benefits from biological diversity should contribute equitably to its conversation and sustainable management;
- a new partnership should be developed and funding for developing countries should be characterized as cooperation among countries;
- in providing sufficient new and additional funds in a spirit of common responsibility, the costs of conservation should not fall disproportionately on countries with significant biological diversity; and
- that there was a need to incorporate an innovative mechanism that could facilitate access to resources and new technologies, including those in the private sector, and for this reason, whatever the final financial arrangements, there was a need for a special fund management mechanism as part of the international legal instrument.

[11] The General Agreement on Tariffs and Trade, Marrakech, 15 April 1994, available at <http://www.wto.org>.

By July 1990 the technical working group had confirmed the view of UNEP and its close working partners, the FAO, UNESCO, IUCN, and the WWF, that a global convention was needed; and the technical working group had identified all of the elements to be included. Meanwhile, the FAO and IUCN had already drafted a number of articles for inclusion in the convention. Small numbers of experts – essentially from UNEP, IUCN and the FAO – put all of the elements into legal language; making every effort not to change the language presented by governments. A document was prepared containing elements for possible inclusion in a global framework convention on biological diversity. It was circulated to governments and formed the basis for discussions at the fourth meeting of the working group.

The working group met again in November 1990 in a meeting attended by seventy countries, fifty of them being developing countries. This time the representation was by legal and technical experts, many of them hoping to begin negotiations. Several experts were very reluctant to begin development of a convention for fear of entering into lengthy and complicated negotiations. Developing countries were not interested in a convention that addressed only the conservation of wildlife; and developed countries were concerned that they would be asked for additional financial resources. The participants hotly debated the elements for inclusion in the convention, whose scope had broadened from what was originally expected and now covered *in situ* and *ex situ* conservation of other wild and domesticated species; use of biological resources; sharing of benefits accruing from their use; and the transfer of financial resources and of technology, including biotechnology. Forty-three of the seventy countries at the meeting presented the secretariat with written comments on, additions to or deletions of, or changes in the elements for inclusion in, the draft convention.

The working group failed to agree on either the composition of its bureau or the structure of the negotiations; a disagreement that would seriously hamper the start of its next meeting, in February 1991, at which it was due to begin actual negotiations. Once the parties managed to select chairmen, the meeting organized into two subgroups. The first sub-group dealt with principles and general obligations, conservation and relation of the conventions to other treaties; the second was concerned with the sensitive issues of access to genetic resources and to technology, financial resources and mechanisms. For fifteen months positions were adjusted and views were changed, frustrations continued and tensions prevailed.

3.3 The Intergovernmental Negotiating Committee (INC): May 1991-May 1992

In May 1991 the working group met for the second time under the new bureau. The meeting of the previous November had made evident the deep disagreements and suspicions that would accompany the upcoming negotiating sessions, which were at several points very difficult. Consequently, feelings were widespread that the

negotiators would never reach agreement on a convention in time for its signature at the upcoming 'Earth Summit' conference, scheduled for June 1992.[12] This anxiety would persist until 17h00 on the last day of the plenipotentiary conference; however, the final hours of the day saw a breakthrough, and before midnight on May 22, 1992, the convention was adopted.

In opening the May 1991 session of the working group, the Executive Director of UNEP again took the active role that he had made the hallmark of the sponsoring organization. He stated that although convention building is a painstaking and exacting process, he was sure that the delegates would succeed, because they saw eye-to-eye on several pivotal issues; and that countries, North and South, accepted the fact that global environmental problems have ushered in a new sense of global partnership. Further, that all participants agreed that a convention on biodiversity must respect the inalienable sovereignty of states over their natural resources; and no-one wanted to create a 'paper tiger,' but rather to build a strong, clear, and concrete agreement, with commitments to action. Although it was hoped that the task would be completed in time for the 1992 conference in Brazil, no one was prepared to sacrifice content for expediency. All agreed that the cost of conservation could not fall disproportionately on countries rich in biological diversity, and that there must be fair compensation for access to biological resources and to relevant technologies. Finally, he suggested, all agreed that the loss of biological diversity is not only an environmental issue; but that it is also a development concern, affecting industry, agriculture, forestry, medicine, and other priority areas.

In the general debate during that session, a number of delegations pointed out that for developing countries their enormous external debt and ever expanding population growth would become a crushing burden if they were to carry out conservation activities. If they were to assume the responsibility for implementing the convention on biological diversity, the debt problem should be examined and adequate additional financial resources provided. The committee's deliberations emphasized the need for:

- further rationalization and coordination of existing international legal instruments on biological diversity;
- equitable distribution of resources between developing and developed countries and sharing the global responsibility of conservation
- establishing a relationship between conservation, utilization and property rights;
- building; the new international legal instrument on existing international legal instruments and measures, taking into consideration the efforts of other international and regional organizations within and outside the United Nations.

[12] This proposed conference was eventually to become a reality in the form of the United Nations Conference on Environment and Development (UNCED); held at Rio de Janeiro in 1992.

- raising public awareness by appropriate education programs at all levels;
- applying measures to curb the contamination of the biosphere by pollutants;
- establishing inventories of flora and fauna at the national level, and
- development and implementation of action programs and other measures for conservation of biological diversity pending preparation of the legal instrument.

The group also agreed that, whenever the concept of common heritage was referred to, it did not mean the establishment of collective international rights to resources within national jurisdictions; nor did it infringe on the permanent sovereignty of states over natural resources.

The third session of the negotiations was held in Madrid in June-July 1991. By this time the working group had been renamed the Intergovernmental Negotiating Committee (INC). The Madrid meeting was the real start of negotiations; and saw the unfolding of deep differences between negotiators from North and South and among negotiators from each of the geographic groups. In the three months between the second and third sessions, several notes were prepared by UNEP and circulated to governments and observers. In spite of the press of responsibilities for organizing the meetings, they also drew up and circulated a revised version of the draft convention.

The revised draft convention included all the draft articles and was reduced from sixty pages to thirty-three pages except for definitions. This was the first real consolidated draft convention, previous texts having been more akin to groups of elements for possible inclusion in a draft convention. It had a number of alternatives under some articles and some seventy bracketed items, most of the latter relating to access to finances and modalities for technology transfer. It was revised in April 1991 by a small group of international lawyers from various regions of the world.

Although there were no fundamental disagreements concerning the broad goals of the convention; with the target date only eleven months away, progress at this session was crucial. There was a need for a drastic narrowing of the numerous options in the revised draft convention; while reiterating, however, that content could not be sacrificed to expediency. Obligations should include *in situ* and *ex situ* conservation; intergenerational equity and responsibility; arrangements for the transfer of technologies, including biotechnology; and the establishment of financial mechanisms, with a proper balance between national sovereignty and collective responsibility. A key point to resolve concerned the wordings 'free access', 'fair access' and 'equitable access'. There was a need to establish the link between the convention and the discussions over intellectual property rights in the – then – current (Uruguay) Round of negotiations within the General Agreement on Trade and Tariffs.

There were, in the draft convention, two options for financial mechanisms; these being a multilateral trust fund with an initial base of US$500 million and an international corporation with initial funding of US$200 million. There were also two model financial mechanisms, the Global Environment Facility and the Multilateral Fund for the Implementation of the Montreal Protocol,[13] described. It was important to reach agreement on an order of magnitude for the finances needed during the first few years of operation of the convention.

From the beginning of the negotiations, polarization was obvious. There were also several delays for reasons which had nothing to do with the substance of the negotiations – late translating into one or another of the six official UN languages used; a misunderstanding of a delegate's statement because of inaccurate interpretation; and even a misunderstanding as to whether this was the first or the third negotiating session of the Intergovernmental Negotiating Committee. Sensitivities and tensions increased, especially between the developed and developing nations.

The issues of country of origin of biological resources, technology including biotechnology, and financial resources became increasingly contentious; as may be seen in three paragraphs of the report on the session. One group wanted the phrases 'country of origin' and 'country providing genetic material and/or genetic resources' to be defined; several delegations wanted to clarify the phrase 'utilization/use of biological diversity' and to note in an appropriate place in the convention that 'technology' included 'biotechnology', avoiding the need to place 'including biotechnology' after every reference to 'technology'. The issue of what was meant by the phrases 'adequate', 'new and additional', and 'new and additional financial resources' kept arising; and the secretariat was requested to prepare a note on the interpretation of these phrases.

A sense of the tension that prevailed may be conveyed by the following exchange. With regard to the issue of technology transfer, the representative of the Netherlands, speaking on behalf of the European community and its member states, said that when discussing that issue it was important to start from a substantive basis, including documents that were presented to other *fora*; and that the discussion should include elements such as training, education, institutional aspects, diffusion of technology, or even commercialization of technology. The description of relevant technologies also needed to be improved. His statement was supported by some delegations; others understood it to mean that discussion of Article 15 and 16 of the draft convention dealing with transfer of technology should be postponed until after the documents referred to had been discussed. The Group of 77 and China said that Article 14 relating to access to biological resources was completely open for further changes of a substantive nature; regardless of the outcome of discussions on Article

[13] See <http://www.multilateralfund.org/>.

15 relating to access to genetic resources and regardless of the outcome of discussions on article 16 relating to access to technology or any other article. Furthermore, that they would consider the outcome of discussions on Article 15 and 16 and other articles in order to harmonize them with the spirit and content of related articles. In response to this, the representative of the Netherlands stated that he had not intended to imply that the working group should not or could not discuss technology transfer; the EC member states were certainly willing to discuss the text paragraph by paragraph if the group so wished.

The revised draft convention presented to the negotiating committee at the start of the session contained 39 articles; ten days later the committee had partially considered only nine of them. Of course, these articles covered the most contentious issues: objectives, fundamental principles, general obligations, access to biological resources and to technology, and financial needs and mechanisms. As they emerged from the committee, the nine articles included two additional ones relating to exchange of information and handling of biotechnology and distribution of its benefits. The entire article describing the objectives of the convention was bracketed, and the rest of the draft convention had more than 160 brackets, compared to 70 for the 39 original articles. In spite of its discouraging aspects, this was a sign that governments had begun serious negotiations; these brackets indicated the magnitude of their differences. Now the pace had to quicken. There were barely eleven months left before the date assigned for signing the convention. The committee agreed to the proposal that they should meet in September and November 1991; and in February and May 1992. They would then revise, review, translate, and distribute documents for the following meeting, prepare notes, and, above all, start the process of informal consultations between those with widely disparate positions (of which there were many) to try to narrow the differences.

During the month that followed the Madrid session, UNEP reconvened the small group of lawyers to review the articles that had not been considered in Madrid. A second revised draft convention emerged and was circulated to governments. Papers were prepared by the authors for the fourth INC session, one clarifying interpretations of various terms and another discussing financial resources and property rights.

The fourth session of the Intergovernmental Negotiating committee took place in September-October 1991. It was attended by eighty-one countries, fifty-seven of them being developing countries. In addition, and a large number of UN organs and NGOs attended or intensified their presence. In opening the session, the chairman stressed the increasing gulf between rich and poor and the need for a new style of negotiating because the conservation and rational use of biodiversity is the collective responsibility of all. Reminding the delegates that important changes regarding intellectual property systems were being proposed in GATT, he urged national delegations to ensure that their approach to the various negotiations was consist-

ent, because it was difficult to reach agreements, and unnecessary tensions were produced when differing standpoints from the same governments were evident in different *fora*.

The capacity of the Consultative Group on International Agricultural Research (CGIAR) to parent research results meant that it would collaborate only with countries having appropriate intellectual property protection systems. Furthermore, it appeared that consideration was being given to the notion that research centres should be free to sell their genetic material in the private sector without sharing profits with the providers of the material. Some private-sector industries had proposed that, if biotechnologies were transferred to developing countries, the latter should be allowed to market their production locally only; which would be a disincentive to developing countries to acquire biotechnology. The situation was further aggravated by the sale of substitutes for natural products by private companies.

Others argued that until recent times local communities had been the users and custodians of biological richness; and that their knowledge and rights should be respected to ensure that the convention was firmly rooted. Indeed, many people considered it unfair that biodiversity should be seen as the common heritage of mankind. Inequalities and imbalance had to be remedied in order to achieve a more stable new world order; and to ensure that democracy prevailed in connection with natural world and trade relations, as well as in the political order.

UNEP's opening statement reminded the negotiators that they were expected to build a meaningful, flexible, and fair convention to bring to Brazil; that their tight timetable could not accommodate any shortcuts or compromises that sacrificed content. Furthermore, progress could not be made regarding additional financial resources and technology transfer until there was a consensus on two basic questions. The first question was one of 'value': the viability of the present economic system was increasingly dependent on access to biological resources, yet the means of assessing the value of biodiversity was lacking. Economic systems were as yet unable to recognize the value of the unknown or undiscovered. The second question concerned technology. Progress was measured in terms of development and use of sophisticated technologies; yet the way in which new technologies were regulated hindered their dissemination where they were most urgently needed.

In spite of all of this exhortation, almost nothing was achieved during this negotiating session. The first subgroup barely reviewed two articles and one paragraph of a third and left them with several brackets. Working Group II simply reached an understanding that was to form the basis for further negotiations. The issue of technology transfer turned out to be a stumbling block, with widely divergent positions by developed and developing countries. The subgroup requested the Secretariat to present a note on the interpretation of the terms 'equitable, preferential, and noncommercial;' and 'preferential, noncommercial, and confessional.' Out of the more

than forty articles which by now constituted the draft convention, thirteen were discussed during the ten-day meeting. They dealt with implementation measures; *in situ* and ex situ conservation; traditional, indigenous, and local knowledge; access to technology; exchange of information; transfer of technology; technical and scientific cooperation; and international cooperation. Completely new drafts were presented at the session. What emerged on October 2, 1991, barely eight months from the Brazil, was that five articles out of the thirteen discussed and eight paragraphs of the remaining articles were bracketed, constituting almost half the text from the end of the fourth negotiating session. In the remaining part, there were more than 150 brackets around words, phrases, and sentences.

The fifth session of negotiations began in December 1991, seven weeks later. The revised draft presented to the session contained forty-six articles, fewer than fifteen having received first or second readings. None had been adopted even at the subgroup levels. The articles on objectives, definitions, identification, and monitoring; on the situation of developing countries; on traditional, endogenous, and local knowledge as well as almost all of those on general obligations, were fully bracketed. Now the full text had more than 300 brackets. While some of these were around commas and periods and prepositions; others were around very crucial issues in the negotiations. For example, phrases were bracketed that dealt with the fair and equitable sharing of the benefits of research in biotechnology arising out of conservation of biological diversity; that dealt with providing adequate, new and additional funding to the developing countries; that dealt with the transfer of technology to developing countries on preferential and noncommercial terms; and that dealt with the assurance that activities within states' jurisdiction or control should not cause damage to the biological diversity of other states or of areas beyond the limits of national jurisdiction.

At the beginning of the December 1991 session, in which seventy-five countries participated, the chairman and the executive director made very brief statements stressing the short time left and the large number of issues yet to be resolved. The delegates agreed that no statements were to be made; rather, they would plunge straight into negotiations. Yet at the end of the session, Group I had considered ten articles, fully bracketed four of them, and failed to agree on any; Group II had considered four articles and disagreed on all of them. These fourteen articles emerged with more than 120 brackets. The basic issues were still far from being resolved. The positions of the North and the South, as reflected in the alternative bracketed languages, were very far apart.

That was the situation at the end of 1991, less than six months from the time set for signing the convention. It was abundantly clear that informal consultations must begin. A collateral problem, however, had developed: whether or not the document would be called the 'Nairobi Convention'. The Brazilians were adamant that it should not be so called, since it was to be open for signature in Rio de Janeiro dur-

ing the UN Conference on Environment and Development. In light of this, Brazil raised the question whether there should be a separate plenipotentiary conference to adopt the convention, or whether this would be better left to the last session of the INC.

The Kenyans very much wanted it to be called the Nairobi Convention, on the ground that most of the negotiations had been carried out there. Each party made its position clear during the plenary sessions, that of Brazil being supported by a number of Latin-American countries. The issue stayed alive through the whole negotiating session. Ultimately a formula was proposed which, while it made no one happy, was accepted by both sides. Accordingly, the parties would have a plenipotentiary session in Nairobi to adopt the agreed text of the convention and the resolutions as recommended by the INC, at which time declarations by governments would be made. The report of the conference together with the adopted text of the convention and the resolutions of the conference, and the declarations made by governments at the time of adoption of the agreed text, would constitute the final act of a treaty to be called the 'Nairobi Final Act.' The convention itself, it was agreed, would carry neither the name of Nairobi nor that of Rio de Janeiro. In this way, a significant problem, although one that had nothing to do with the substance of the convention, was solved.

In February 1992, the INC reconvened and started negotiations with a revised text of the convention containing some 350 brackets. The sixth session was attended by eighty-three governments, the highest number ever in attendance. Once again a large majority, fifty-eight countries, were from the developing world. By the end of the session it was becoming increasingly obvious that governments were still very far from reaching agreement. The situation became very delicate; with three months remaining until Rio, the Convention was in a poor state. The article on its objectives was completely bracketed; and there were six brackets covering fair and equitable sharing of benefits, adequate new and additional funding, cost and benefit sharing between developed and developing countries, and favorable economic and legal conditions for technology transfer on preferential and noncommercial terms. These same issues had also been causes of contention between developed and developing countries during the negotiations of the 1987 Montreal Protocol on Substances That Deplete the Ozone Layer;[14] the 1989 Basel Convention on the Transboundary Movement of Hazardous Wastes and their Disposal;[15] and the Climate Change Convention.[16] They had featured prominently in the UNCED preparations, as well as during the conference itself, and surfaced clearly after the conference during the

[14] Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, into force 1 January 1989, 26 *International Legal Materials* (1987) 154, <http://www.unep.org/ozone/>.

[15] Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, into force 5 May 1992, 28 *International Legal Materials* (1989) 657, <http://www.basel.int>.

[16] United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, <http://unfccc.int/>.

negotiations for the Desertification Convention[17] and the meetings of the UN Commission on Sustainable Development.

Again at the end of the session the article on use of terms, as well as that on fundamental principles, was fully bracketed. The article on general obligations was also fully bracketed, with a complete alternative text also between brackets. Five more full articles were bracketed and several had disputed alternatives to several paragraphs. The negotiating session ended with a draft convention having more than 250 brackets – down from some 350 brackets at the start, at least. The issues that remained in dispute included the rights of countries or indigenous people providing generic resources; conditions for the transfer of technology and for access to generic resources; questions relating to national jurisdiction; what ought to be conserved *in situ* and *ex situ*; the link between implementation of the provisions of the convention by developing countries and providing such countries with technical and financial resources; impact assessments of incentive measures; global lists of threatened species and ecosystems; handling of biotechnology and distribution of its benefits; financial resources and mechanisms; the secretariat; and several other issues. With but a single meeting left before the date set for signing the convention, the situation appeared bleak.

The seventh and final negotiating session was scheduled for May 1992, barely a week before the Rio conference. UNEP members of the Secretariat undertook the seemingly impossible task of drafting compromise formulations for all that were in brackets, consulting with the chairman and key delegations through all means of communication. As a result, a paper was prepared. The proposed convention of twenty-seven articles and a preamble was presented to the negotiators on 11 May 1992, the first day of the last negotiating session. As this was less than four weeks from the Rio Conference, the target date for its signature, many of the delegates were pessimistic.

While the delegations worked on the basis of the joint paper, Presidents and the UNEP Executive Director held, separately and jointly, nonstop informal consultations with individual delegations or groups of delegations; which consultations often continued until the early morning hours. An outstanding job was done by all concerned in trying to smooth out the differences over the most difficult issues. These most difficult issues were access to biological resources; access to technology including biotechnology; financial resources and mechanisms; and global lists of threatened ecosystems and species. These issues continued to be the subject of negotiations and intensive informal consultations among the delegations.

[17] United Nations Convention to Combat Desertification in Countries Experiencing Serious Drought and or Desertification, Particularly in Africa, Paris, 17 June 1994, into force 26 December 1996, 33 *International Legal Materials* (1994) 1309, <http://www.unccd.int>.

The May 1992 session of the Committee, attended by a record 101 governments and 25 United Nations and other international organizations, came on the heels of the last session of the Negotiating Committee on the Climate Change Convention, adopted in New York. Developing countries felt, in general, that they had been put under pressure to agree to the final text of the Climate Convention; and the atmosphere remained very tense at the last negotiating session for the Biodiversity Convention.

In his opening address, the Chairman drew the Committee's attention to the fact that, although there were still several bracketed sections in the text, many paragraphs and articles were already clear of brackets, which meant that agreement was, in his view, achievable. He welcomed the adoption of the Convention on Climate change and expressed the hope that the Biological Diversity Convention negotiations, which had started well before those on climate change, would also be able to reach a successful conclusion. He referred to the informal note prepared by the UNEP Executive Director and by himself to assist the countries in the negotiations and advised them to make use of it.

The Executive Director then pointed out issues which needed compromise solutions. Some parts of the article on the use of terms had to be further developed on the basis of scientific evidence; and it might be advisable simply to establish the principle of global lists of areas, processes, and activities, leaving it to the parties to decide on the basis of scientific advice when to establish them and what their contents should be. Although the principle that there was need for new and additional resources for developing countries and countries in transition no longer seemed to constitute a problem, divisions still existed among negotiators on a number of issues relating to financial resources and mechanism. Two issues on technology transfer needed to be resolved. The first concerned the very complicated and controversial area of intellectual property rights; if this issue could not be settled at the current session, however, the Committee could perhaps move forward where consensus was possible and find a mechanism for resolving the issue in the future. The second was that of biotechnology; its transfer, information regarding the introduction of its products and the sharing of profits from its applications to biological resources.

Negotiations continued until May 22, the last day of the meeting. On the morning of that day there were still a large number of brackets and disputed issues. The three leaders of the INC held a series of informal consultations with the differing parties, which resulted in compromise formulations. The Chairman introduced the resulting amendments at 15h00 in the afternoon, stressing that they represented a compromise and that the draft convention, as amended, would be considered by the INC as a package that should be preserved. There was a brief silence, and then, at 16h11 the delegates burst into applause. The miracle had been achieved. The amended text was accepted, although even at that moment various governments made statements showing how much they differed in their assessment of the results achieved.

Two hours after the conclusion of the work of the INC, the Plenipotentiary Conference was opened to adopt the agreed text of the convention and four resolutions: one of them designating the Global Environment Facility as the interim financial mechanism for the convention; two dealing with urgent activities that must be taken in line with the provisions of the convention; and, pending its entry into force, the fourth paying tribute to the government of Kenya, the host of the Plenipotentiary Conference. The conference also listened to declarations by governments. All this was included in the Final Act, which was signed in the final hour of the last day of the meeting.

At the time of adoption several delegations again made declarations. Those of France, India, and the United States were of particular significance. France was concerned about the failure of its proposal to establish global lists of biological resources. India was concerned about the issues of liability and compensation and their relation to other international agreements and the financial mechanism; while the United States (and most of the developed countries) had exactly the opposite concern, and remained deeply concerned about the issue of intellectual property rights. A consensus was reached, therefore, on a text of the convention that pleased few. This seems, arguably, a fair indication that the provisions of the convention were at least balanced.

The Convention was opened for signature at a Plenipotentiary Conference on the Convention of Biodiversity convened in Rio de Janeiro at the beginning of UNCED, the UN Conference on Environmental and Development, in June 1992. The US Administration took a negative stance toward it, however. US President Bush personally took issue with it, during his re-election campaign, declaring on television that it would affect, presumably negatively, every family in the United States. In the background, there seems to have been a misunderstanding, or misinterpretation, of some of the provisions on biotechnology, generic material, and access to technology. Although the United States refused to sign the convention at Rio; 157 governments did sign, mostly at the level of their heads of state. Again, it is arguable that, for the Convention to have met with the approval of the great majority of the countries attending the Earth Summit, it must have been comparatively well-balanced.

4. Lessons Learned

The negotiations on the Biodiversity Convention spanned a period of more than five years. While no one disputed the fact that the loss of genetic resources, ecosystems, and species was accelerating at an alarming rate through human actions; when it came, during these years, to the matter of adopting measures for halting this acceleration and trying to reverse the trend, negotiations centred on political, financial, and economic gains. Most governments had their own agendas, widely divergent and difficult to bring together.

On the other hand, the discussions of technical and scientific facts were calm and relaxed, and agreements were most easily achieved at these times. When the science and economics of the issue were clear and unwavering, when the overall objectives of the convention were clearly spelled out, and when there were enough strong personalities to lead, to speak with authority, and to seek compromise, a good deal of agreement could be reached. The negotiations greatly benefited from the presence of a number of committed delegates. It was also important that the representatives of the organization serving the negotiation of the treaty took an active but objective stand, defending the rights of the environment without trespassing on the limits of tolerance of the negotiating governments.

During these negotiations, and those on climate change, certain new and significant terms entered the vocabulary of environmental negotiations; such as:

- the common concern of mankind as a different concept from the common heritage of mankind;
- common but differentiated responsibilities;
- burden sharing among developed countries;
- intergenerational equity and intergenerational responsibility;
- the rights of indigenous communities – in this case, in sharing the benefits of using the biological resources which they may have cultured over the years.

These terms arguably, and hopefully, reflect a shared willingness by states to accommodate others' views in future negotiations surrounding the Convention on Biological Diversity; and in negotiations toward future conventions on the use and protection of biodiversity.

The Cartagena Protocol on Biosafety: History, Content and Implementation

Tewolde Berhan Gebre Egziabher[1]

1. Introduction

The negotiations of the Cartagena Protocol on Biosafety[2] were finalized on 29 January 2000 in Montreal, Canada. It came into force on 11 September 2003. A history of the Cartagena Protocol by a professional historian who was not involved in the negotiation process, and could thus be expected to have objectively evaluated the roles played by the various protagonists, has not been written. Given the short time since the negotiations were finalized and the Protocol came into force, such an objective history could not as yet have been expected. Time will show, in fact, whether expecting a history of the Protocol is presumptious. The history the author will recall here, as one of the main negotiators of the Protocol, therefore necessarily reflects the author's personal notes and unpublished reports; although efforts have been made to resort to the documents produced by the various protagonists to assist with objectivity. Both because the author knows the issues intimately, and in the belief that developing countries carried a heavier load owing to their position of greater disadvantage, more attention will be given to negotiations involving developing countries. Their load is heavier because of both their obvious limitation with well trained human resources, and because of the greater complexity of their biodiversity. It should be pointed out that complexity of biodiversity increases the risks of introgression and thus complicates biosafety considerations. It is also more than likely that history from the perspective of developed countries is going to be well preserved and presented by their better endowed professionals and institutions.

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[1] Dr., General Manager of the Environmental Protection Authority, Ethiopia; Winner of the 2006 UNEP Champions of the Earth prize.

[2] Cartagena Protocol on Biosafety, Montreal, 29 January 2000, in force 11 September 2003, 39 *International Legal Materials* (2000) 1027, <http://www.biodiv.org/biosafety/default.aspx>.

The Biosafety Protocol is complex both because of the inherent nature of regulating genetic engineering, and because of the compromises that had to be reached to accommodate a wide range of beliefs (ideologies) on the sanctity of, and acceptability of human-made modifications to, life. This complex situation was exacerbated by the wide range of perceived positions of advantage and disadvantage of human societies.

It is only a few years since the Protocol came into force. Therefore, its implementation is only just beginning. In any event, the implementation of the Protocol will remain difficult so long as the country which is the most active in genetic engineering, the United States of America, remains a non-party. It must also be noted that, like all environmental agreements, the Cartagena Protocol on Biosafety lacks an enforcement mechanism comparable with clout comparable to that of the Dispute Settlement Body of the World Trade Organization, let alone to the Security Council of the United Nations organization.

2. A brief history of the Cartagena Protocol on Biosafety

2.1 The Convention on Biological Diversity

The Cartagena Protocol on Biosafety is international law that emanated from the Convention on Biological Diversity.[3] Therefore, its history starts with that of the Convention on Biological Diversity.

The United Nations Environment Programme (UNEP) Governing Council decided on 17 June 1987 to establish the Ad Hoc Working Group of Experts on Biological Diversity. This Group of Experts held 3 meetings between 1988 and 1990, and produced a final report.

On 25 May 1989, the UNEP Governing Council established the Ad Hoc Working Group of Legal and Technical Experts to negotiate an international law 'for the conservation and rational use of biological diversity'. This Ad Hoc Working Group held two negotiation sessions in Nairobi, one in November 1990, and another in February-March 1991. In May 1991, the UNEP Governing Council changed the name of the Ad Hoc Working Group to the 'Intergovernmental Negotiating Committee (INC) for a Convention on Biological Diversity'. The INC held five more negotiation sessions during the period 1991-1992.

[3] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>. A brief history of the negotiations that gave us the Convention on Biological Diversity is given e.g. in UNEP, 'Nairobi Final Act of the Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity' (UNEP, 1992) at 4-7.

The INC was transformed into a Conference to adopt the final text of the Convention on Biological Diversity on 22 May 1992. The Conference also adopted four resolutions and registered 14 declarations by States or groups of States. There were also four more declarations registered between 5 and 13 June 1992 during the signing of the Convention.

Resolution 2, in its Paragraph 2(c), asks the UNEP Governing Council to 'consider requesting the Executive Director of the Programme [UNEP] to convene an Intergovernmental Committee on the Convention on Biological Diversity starting in 1993 to consider... the need for and modalities of a' biosafety protocol. This was intended to start the implementation of Article 19(3) of the Convention before it came into force.

2.2 Report of Panel IV

To prepare for the implementation of Paragraph 2(c) of the 2nd Resolution of the Nairobi Final Act of the Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity of 22 May 1992, the Executive Director of UNEP, Mr Mostafa Tolba, established a group of experts to analyze the need for and modalities of a biosafety protocol. This group of experts was referred to as Panel IV. It was co-chaired by Mr Veit Koester of Denmark; and by the present author, Dr. Tewolde Berhan Gebre Egziabher of Ethiopia. A total of 29 experts from 12 countries (including the European Economic Community) as well as five organizations participated in the three meetings of Panel IV.[4] The report of Panel IV was submitted to UNEP on 28 April 1993.[5]

2.3 International technical guidelines for safety in biotechnology

The Ministries of Environment of the Netherlands and the United Kingdom convened a meeting of international experts in March 1994 and developed the first draft of technical guidelines on safety in biotechnology. The draft was discussed by invited experts from 17 countries in May 1994. These draft guidelines were revised further.[6]

These draft guidelines were promoted by UNEP and subjected to further consultations in the various regions.[7] A 'global consultation of government-designated

[4] Of the 29 participants, seven attended all three sessions, eight attended two sessions each and the remaining 14 attended only one session each. The final (3rd) session was attended by 19 participants, the 2nd session by 17 participants and the first session by 14 participants.

[5] Expert Panels Established to Follow-up on the Convention on Biological Diversity – Panel IV, UN Doc. UNEP/Bio.Div./Panels/Inf.4, (UNEP, 1993, unpublished).

[6] For example, the International Technical Guidelines for Safety in Biotechnology, 21 May 1994 Draft, (Netherlands Ministry of Environment and UK Department of Environment 1994, unpublished).

[7] UNEP Sponsored Worldwide Consultations on Technical Guidelines for Safety in Biotechnology and Related Capacity-Building Requirements – Conclusions and Recommendations of Regional Consultations, Biosafety Guidelines /Inf.1, (UNEP 1995, unpublished).

experts on [the] international technical guidelines for safety in biotechnology' was then held in December 1995; and this meeting adopted 'the final text of the United Nations Environment Programme International Technical Guidelines for Safety in Biotechnology'.[8] Although the meeting was considered global, only 59 countries and the European Commission took part in it.[9] Based upon paragraph 3 of Decision 1, made at this meeting,[10] UNEP organized an international workshop in late 1996 to review the implementation of these Guidelines.[11] This workshop was attended by experts from 55 countries. The last statement in the recommendation from this workshop was a call for UNEP 'to review periodically the Guidelines...'[12] This workshop was soon followed by the Third Conference of the Parties to the Convention on Biological Diversity (COP III). On 8 November, the Committee of the whole of COP III decided to consider the negotiations on the biosafety protocol and progress on the implementation of the UNEP International Technical Guidelines for Safety in Biotechnology together as one item.[13] Future COPs focused only on the biosafety protocol negotiations and the UNEP Technical Guidelines on Safety in Biotechnology faded 'into oblivion' as an issue for the COP to discuss.

2.4 Negotiations on the Cartagena Protocol on Biosafety

2.4.1 Introduction

UNEP's Panel IV Report came out with a majority view which called for negotiating a biosafety protocol, and a minority view which stated that there was no need for a biosafety protocol. The minority view was that of the representative from the United States, supported by two representatives of the Organization for Economic Cooperation and Development.

By the time the Report of Panel IV was finalized, the Executive Director of UNEP who had established the Panel, Mr. Mostafa Tolba, had been replaced by Ms Elizabeth Dowdeswell of Canada. Under Ms Dowdeswell, UNEP tried to keep the Panel IV Report from the meetings of the Intergovernmental Committee on the Convention on Biological Diversity (ICCBD), which was the body that had been created under paragraph 2 of Resolution 2 of the Nairobi Final Act of the Conference for the Adoption of the Agreed Text of the Convention on Biological Diversity[14] to prepare the ground for the implementation of the CBD while it was awaiting entry into force.

[8] Report of the Global Consultation of Government-designated Experts on International Guidelines for safety in Biotechnology, UNEP/Global Consultation/Biosafety/4, 28 December 1995,) (UNEP 1995, unpublished) at 9.

[9] *Ibid* at 3.

[10] *Ibid* at 9.

[11] Report of the International Workshop to Follow-up on UNEP's International Technical Guidelines for Safety in Biotechnology, (UNEP 1995, unpublished).

[12] *Ibid* at 11.

[13] Report of the Third Meeting of the Conference of the Parties to the Convention on Biological Diversity, (UNEP 1995, unpublished) at 28.

[14] UNEP, 'Nairobi Final Act', *supra* note 3, at 9-10.

The Interim Secretariat of the CBD in UNEP oversaw the functioning of the IC-CBD. The document prepared by the Interim Secretariat for the work of the IC-CBD on biosafety deliberately left out mentioning the Panel IV Report. The first meeting of the ICCBD in 1993 focused only on capacity building and international cooperation in biosafety.[15] The reason can be seen by studying the document on biosafety presented to the 2nd session of the ICCBD in 1994.[16] In its 19th paragraph, this document suggested to the ICCBD that the term 'protocol' should be defined and added that it 'may then proceed to consider whether or not a protocol is needed; whether it is an immediate need or whether its development is envisaged for the future.' However, in its 18th paragraph it states that '[a]s familiarity with LMOs increases and experience accumulates... the patterns of regulation will likely evolve from initial stringency to less stringent requirements'. In its 20th paragraph, it states that '[i]f a protocol is not needed at all or if it is only needed in the future, the Committee [ICCBD] may wish to consider whether other instruments such as voluntary codes of conduct and guidelines could be considered....' To make this view palatable, the document's 14th and 21st paragraphs emphasize the need for capacity building in developing countries.

The UNEP International Guidelines for Safety in Biotechnology were, therefore, promoted by UNEP in order to stifle the call for a biosafety protocol made by UN-EP's own Panel IV. This was realized by the environmental NGOs and by developing countries; which, therefore, made calls for the Panel IV Report and for starting negotiations on a biosafety protocol.

Both UNEP's attempt to prevent negotiations on biosafety from starting and the calls for them to start continued in the First Conference of the Parties to the CBD, which took place in November- December 1994. From among the NGOs, the Third World Network, Greenpeace, Community Nutrition Institute and Friends of the Earth distributed a statement to that effect on 5 December 1994. On 6 December, they again distributed a similar statement, this time joined also by Accion Ecologica, condemning particularly Australia, Austria, Canada, the European Union, Finland, Japan, New Zealand, Norway, Sweden and Switzerland for the terms of reference of the Open-ended Ad Hoc Group of Experts on Biosafety which COP I had established through Decision I/9. According to these NGOs, the terms of reference did 'not address the question of modalities, but rather will go into a never ending process of considering the need'.

[15] Interim Secretariat of the Convention on Biological Diversity, 1993 (unpublished); Informal Note no 2 – Summary of the Results of the ICCBD Meeting of October 11-15 1993 (Interim Secretariat of the Convention on Biological Diversity, 1993, unpublished) at 1.

[16] UNEP, Considerations of the Need for, and Modalities of, A Protocol on Biosafety, UN Doc. UNEP/CBD/IC/2/12, (UNEP, 1994, unpublished) at 5.

A Panel of Experts on Biosafety, established by the Secretariat of the Convention to prepare for the meeting of the Open-ended Ad Hoc Group of Experts on Biosafety presumably in order to bypass the Panel IV Report, met in May 1995. This Panel's report[17] made no mention of the report of its predecessor, Panel IV. The Panel stated that it strongly believed that capacity building is essential[18] and that immediate action is needed to assess biosafety frameworks.[19] Furthermore, it was stated that the adoption of an international framework, such as guidelines, regulations, codes of conduct or a protocol, would not in itself insure safety.[20] The overall tone of the Panel Report was that of letting things be; in other words, that of not taking any immediate international action.

2.4.2 Negotiations in the Open-ended Ad Hoc Group of Experts on Biosafety

Following Decision I/9 of COP I, an Open-ended Ad Hoc Group of Experts on Biosafety met in July 1995. Experts from 83 countries, 21 from Africa, and one regional organization (the European Community) participated in a decisive debate that shaped the future of biosafety. The meeting examined the report of the Panel of Experts. It soon became clear that this document was not acceptable to all delegates. In fact, of all the parties to the CBD, only Australia and Canada were fully in favour of this document. They were fully supported by the United States which, though not a party, was active at canvassing opinion.

As the meeting continued, the call for recommending to COP II that it authorize the negotiations on a biosafety protocol grew. Because of the role the author had played in Panel IV, as its co-Chair, virtually all delegates from developing countries rallied behind the author to make this call.

Perhaps feeling the need to break this unity among delegates from developing countries, some delegates from the United States apparently campaigned negatively against the author in the corridors. They pointed out, rightly, that the call for negotiating a protocol was strongest from Africa. They explained it as an unjustified ignorant fear from the most backward continent about avant-guard modern biotechnology. This began to cause defections from the call for a protocol. Fortunately, at this point, Professor Elaine Ingham of the Oregon State University in the United States explained her research results on the genetically engineered soil bacterium *Klabsiella planticola.* She pointed out how this normally useful bacterium had been rendered dangerous to plant life by genetic engineering which had been intended to make it more useful for producing ethanol from cellulose. After that, the developing country delegates rallied around the author again and the call for a protocol grew louder. Of the industrialized countries, New Zealand, Germany, Japan and South Korea sided

[17] Report of the Panel of Experts on Biosafety, CBD/Biosafety Expert Group/2 (presented to the Open-ended Ad Hoc Group of Experts on Biosafety, Madrid, 24-28 July 1995), (CBD, 1995, unpublished).
[18] Para. 83(c).
[19] Para. 83(d).
[20] Para. 35.

with Australia and Canada. Finally, after much debate, they accepted to allow a decision that recommended to COP II that a biosafety protocol be negotiated.

The main issues to be covered by the protocol were also identified.[21] However, the industrialized countries, on the whole, did not want socio-economic considerations and liability and redress to be included in the protocol.

2.4.3 Negotiations in the Open-ended Ad Hoc Working Group on Biosafety

The Open-ended Ad Hoc Working Group on Biosafety was established by COP II through Decision II/5.[22] The first meeting of the Working Group was in July 1996. On the first day, the African Group elected the author as its spokesperson. The meeting reviewed and elaborated the items identified by the Madrid meeting of the Open-ended Ad Hoc Groups of Experts. The question of whether or not to include socio-economic issues and liability and redress divided the G77 and China. Brazil, South Korea, Costa Rica, and Argentina took the stand of the industrialized countries that these two items should not constitute a part of the protocol.

At the suggestion of Ms Amarjeet Ahuja of India and the author, the developing countries – except for these four - formally pushed these two issues as essential; and the G77 and China ceased functioning in any meaningful manner in the subsequent biosafety negotiations.

The African Group then asked the author to draft a biosafety protocol on behalf of Africa. The Third World Network promised to raise the funds for the African Group to meet and approve the draft that we would prepare in Ethiopia. Upon returning to Ethiopia, the author initiated the drafting of the protocol. Experts from four institutions under my chairmanship developed the working draft. As promised, the Third World Network provided funding; and the African Group met in October 1996 to revise and adopt the draft protocol.

Early on during this meeting, the South African representative attempted to steer the African Group towards a minimalist direction so that the protocol would be weakened. Fortunately, he was not followed by any delegate from another African country. The author realized that this delegate did not want the South African delegation formally to separate from the African Group for fear of a political backlash at home; but that he would continue to cause difficulties during negotiations. Neither did I want the African Group formally to expel the South African delegation because that would have reduced our political impact as an African Group. Managing this delegate's disruptive tactics proved the greatest difficulty the author had in leading the African Group.

[21] Elaboration of the Terms of Reference for the Open-ended Ad Hoc Working Group on Biosafety (Aarhus, 22-26 July 1996), UN Doc. UNEP/CBD/BSWG/1/3), (CBD, 1996, unpublished).

[22] Report of the First Meeting of the Open-ended Ad Hoc Working Group on Biosafety, Aarhus, 22-26 July 1996, UN Doc. UNEP/CBD/BSWG/1/4, (CBD, 1995, unpublished).

In spite of these disruptive efforts, the African Group adopted the text of a draft protocol. I submitted this African draft protocol in the name of the African Group to the CBD Secretariat at the COP III in November 1996.

The second meeting of the Open-ended Ad Hoc Working Group on Biosafety took place in May 1997. The submissions of views by governments on the provisions of the protocol were discussed by the meeting. A compilation of the views had been prepared by the CBD Secretariat.[23] Except for the submission of the African Group, which was in the form of legal text, the remaining submissions were descriptive in nature. Though these views showed the diversity of thinking, they could not be used to start negotiations. The meeting was, therefore, basically for exchanging opinions. The meeting established a Contact Group to consider how the definitions of key terms should be formulated. At its suggestion, the Working Group directed the Secretariat to compile a list of such terms from country submissions in alphabetical order for being defined by the Contact Group starting at the third meeting.

The third meeting of the Open-ended Ad Hoc Working Group took place in October 1997. More detailed submissions[24] by governments were made the basis of the negotiations. South Africa submitted its own separate text; but would still not formally declare that it disagreed with, and was splitting from, the African Group. Therefore, the country continued to disrupt African Group meetings from within. The meeting of the Working Group widened the scope of the work of the Contact Group to include negotiating on Annexes. It also established (divided into) two Sub-working groups and began negotiating on the consolidated text of country submissions trying to produce an agreed text. Delegates were able to move in and out of the Sub-working Groups and the Contact Group as their interests dictated.

The fourth meeting of the Open-ended Ad Hoc Working Group took place in February 1998.[25] The negotiations, which continued in the two Sub-working Groups and two Contact Groups already established, became highly polarized. The second Contact Group focused on financial and institutional issues. The delegation of the United States tried to divide the African Group by requesting that countries attend consultations on subregional bases. Attempts by South Africa to organize the delegates from the Southern African Development Community for a consultation with the United States delegation on their own failed because the other delegates refused to speak to the United States delegation except as the African Group as a whole.

[23] Individual Government Submissions on the Contents of the Future Protocol, Montreal, 12 to 16 May 1997, UN Doc. UNEP/ CBD/BSWG/2/Inf.2, (CBD, 1997, unpublished; Compilation of views of Governments on the Contents of the Future Protocol, 12 to 16 May 1997, UN Doc. UNEP/CBD/BSWG/2/2, (CBD, 1997, unpublished).

[24] Government Submissions, 13 to 17 October 1997, UN Doc. UNEP/CBD/BSWG/3/5, (CBD, 1997, unpublished).

[25] Report of the Fourth Meeting of the Open-ended Ad Hoc Working Group on Biosafety, 5-13 February 1998, UN Doc. UNEP/CBD/BSWG/4/4.

However, consultations were held with the European Community and with other regions as an African Group.

The fifth meeting of the Ad Hoc Open-ended Working Group took place in August 1998. Many states submitted final portions of their proposed detailed wording for the provisions of the protocol,[26] as had already been done by the African Region. As a consequence, the first draft text of the protocol, albeit with many brackets, was compiled;[27] and the negotiation process became clearly defined. So did the divisions among states and groups of states. It became clear that the industrialized countries, as a bloc, were blocking any negotiations on liability and redress by simply refusing to comment on the issue. Therefore, the delegates of developing countries also refused to comment on any issue other than liability and redress. One day of near total silence, however, forced the industrialized countries to agree seriously to negotiate also on liability and redress; and the negotiations then continued. The question of whether products of living modified organisms (LMOs) should also be regulated by the protocol also became divisive. The African Group and most developing countries wanted products of LMOs to be covered by the protocol. The issue remained unresolved to the end of the negotiations.

Upon returning home, now that the negotiating text was available, the author commented on the implications of each bracketed text, pointed out what our preference should be, and sent these comments to my other African colleagues. The majority of them were accessible by e-mail, and this greatly helped. When the negotiations started in 1996, communications within Africa had been very difficult. However, many changes in electronic communication had occurred since then. Since African delegates had read the author's comments and had thought about the issues, taking a common position during the subsequent negotiation session became easier.

The Chairman of the Working Group rightly gauged the divisions among delegations to be very wide, and the time left too short. Trying to hasten the negotiations, he called a meeting of the Bureau of the Working Group – which included the elected representative from each Region – and a selected number of other delegates in October 1998. This was dubbed the 'Extended Bureau'. This Extended Bureau discussed ways of hastening the negotiations. For the author, the most intriguing suggestion was that made in the 4th paragraph of the draft decision proposed by the European Union, which 'strongly urged states and regional integration organizations to operate as many of the provisions as possible of the protocol...' It is intriguing because this draft decision, if passed, would have reduced the protocol from being an international law to becoming a suggested procedure. This draft decision was not

[26] Report of the Fifth Meeting of the Open-ended Ad Hoc Working Group on Biosafety, 17-28 August 1998, UN Doc. UNEP/CBD/BSWG/5/3, (CBD, 1998, unpublished).

[27] Open-ended Ad-hoc Working Group on Biosafety, Extended Bureau Meeting, Agenda Item 12, Document No. 10, Proposal from the European Union on Voluntary Application of the Protocol, (CBD, 1998, unpublished).

tabled at the subsequent meeting of the Working Group and, in the final analysis, the meeting of the Extended Bureau did not help much.

The sixth and final meeting of the Open-ended Ad Hoc Working Group on Biosafety took place in February 1999. The author has not seen a CBD Secretariat's report with much detail on this meeting;[28] but had personally taken detailed notes because it was the most important of the meetings of the Working Group. The negotiations were scheduled to be finalized at that meeting. Negotiations continued in the two Sub-working Groups and two Contact Groups. The negotiating text had a great many brackets and it seemed certain that no consensus text would be produced from it. LMO commodities, products of LMOs, socio-economic issues, the Precautionary Principle and the scope of the protocol remained divisive. On 15 February, the Chairman formed his Friends of the Chair group from among the members of the Regional Groups. The Chairman had said that his Friends of the Chair were intended to advise him and not to negotiate. In practice, however, these two functions became virtually indistinguishable.

On 16 February, formal negotiations, which were open to all delegates, continued. In the evening, the Chairman, with the Friends of the Chair, reviewed progress, and found it to be minimal. On 17 February, the Chairman, following a suggestion by one of the Bureau Members, informed the Bureau, which met at the beginning of work every morning, that anything agreed in the Sub-working Groups and Contact Groups would not be re-opened in Plenary, which would merely endorse the agreement. The author contended to him that this would not be transparent, and was thus undemocratic, especially since most developing countries were represented by single delegates who could not be present in both Sub-working Groups and Contact Groups simultaneously; however, both he and his Vice-Chairman tried to implement it, which contributed to the failure of the negotiations. In the evening, he announced that he would return with a Chairman's text the next day. Most of 18 February passed with the delegates waiting for this text; which arrived in the afternoon. The rest of the afternoon and the night were taken up with delegations studying the new text.

This new text galvanized the groupings into even greater confrontation. The developing countries, with the exception of Mexico, Argentina, Chile and Uruguay, created the Like-minded Group of Developing Countries; and elected the author as their chief negotiator. Canada, Australia, Argentina, Uruguay, Chile and the United States of America had already formed the Miami Group. These two groups were the furthest apart on most substantive issues. As a result of these groupings, the usual UN Regional groups could no longer continue. Mexico joined with Japan, Switzerland Norway and New Zealand to form the Compromise Group. The Central and

[28] Draft Report of the Sixth Meeting of the Open-ended Ad Hoc Working Group on Biosafety, Cartagena, 14-19 February 1999, UN Doc. UNEP/CBD/BSWG/6/L.1.

Eastern European Group remained intact. These two groups became rather quiet in the confrontation. The European Union continued unaffected. The European Union stayed very active, with its position on most of the divisive issues being in-between those of the Miami and the Like-minded Groups.

On Saturday 20 February, the chief negotiators of the various Regional Groups, with their advisors, met twice over the new draft. On Sunday 21 February, the Chairman produced a revised text. It did not change the confrontation. In the night, the chief negotiators of the Miami, European and Like-minded Groups met. The chief negotiator of the European Group offered what he called 'a package' to the Miami Group. The chief negotiator of the Miami Group also had a list of changes which he wanted included in the Chairman's revised text of the draft protocol. The suggested changes from both Groups wanted the provision on the Precautionary Principle to be deleted. Both sets of proposals were unacceptable to the present author. The proposal of the Miami Group was also unacceptable to the chief negotiator of the European Union, and vice versa. The negotiations therefore failed.

In spite of unusual and extraordinary attempts by the Chairman to push his new draft protocol through, it was resoundingly rejected on the early morning of 22 February, and the negotiations by the Open-ended Ad Hoc Working Group on Biosafety were formally abandoned. It was agreed, however, that the text would be presented to the Extraordinary Conference of Parties of the CBD.

A formal Extraordinary Session of the Conference of the Parties had been planned to approve the text of the finalized protocol. Instead, this Extraordinary COP had to restart the negotiations almost from scratch; although, of course, it took into consideration the draft protocol passed on to it by the Ad Hoc Working Group on Biosafety.

2.4.4 Negotiations in the extraordinary sessions of the Conference of the Parties to the Convention on Biological Diversity

The meeting of the Extraordinary COP started only 5 minutes after the negotiations of the Open-ended ad Hoc Working Group ended in the early morning of 22 February 1999. The meeting was brief. At the end of the meeting, the Chairman of the Extraordinary COP convened another negotiation session involving the chief negotiators of the Miami Group, the European Union and the Like-minded Group. The chief negotiator of the European Union again presented his previous package, which, among other problems, accepted the deletion of the Precautionary Principle; as did the chief negotiator of the Miami Group with his set of proposed changes. The two continued discussing their respective proposals as if the present author did not exist. It looked as though they were about to agree. At this stage, even the European Union's package contained provision for virtually unregulated import and export of LMO commodities; with the proviso that it this would be reviewed at the first meeting of the Parties after the Protocol has come into force. The author, therefore,

rejected both sets of proposals; and told the two chief negotiators that the practice of ignoring developing countries had 'completely died with the colonial era'. The Chairman tried to break the deadlock by introducing an enabling clause similar to that of the European Union which, he thought, would have made it possible for the author to accept the Miami Group's position on LMO commodities. The enabling clause stated that the issue of LMO commodities would be renegotiated after the protocol came into force. The Miami Group's chief negotiator, however, rejected it. The author was also going to reject it, but one rejection was good enough and so kept quiet.

On 23 February, the last day of negotiations, the chief negotiators of all the Regional Groups (i.e. not only those of the Miami, European Union and Like-minded Groups) met. It became clear that there would be no agreement. The maneuvering by each Group then turned into trying to avoid appearing as the party that had wrecked the negotiations. After much wrangling, the negotiations in Cartagena were ended; with the chief negotiator of the Miami Group refusing the provision that would have made it possible to re-negotiate LMO commodities after the protocol came into force. The author would also have rejected it – although for the exact opposite reason – but not have to; thinking it more fitting that the Miami Group appeared to have wrecked the negotiations. However, the Miami Group promised to come back to the negotiations after one year with a new proposal that took into account the difficulties on LMO commodities expressed by the author on behalf of the Like-minded Group.

However, the Chairman of the Extraordinary COP did not wait for one year. Informal consultation continued by all parties. In an informal discussion with Mr John Herity of Canada, the author had suggested that, if the Miami Group knew the nature of the agricultural systems in developing countries, where most crop gene pools are found, their delegations would appreciate our problems more clearly. He took up the challenge. Delegates from the Miami Group of countries therefore visited Ethiopia from 2-6 September 1999; and toured farms, homesteads and grain markets. They left Ethiopia saying that this was going to help them to come up with an acceptable proposal for the next negotiation session.

In the meantime, the author wrote an analysis of the negotiations in Cartagena, and of the text of the draft Protocol at the end of those negations, pointing out what I thought we should fight for; then distributed this per e-mail to the delegates of the Like-minded Group. This helped to consolidate the views of this Group.

From 15-19 September 1999, the Chairman of the Extraordinary Conference of the Parties invited delegations to informal consultations in Vienna. These consultations helped to show more clearly the difficulties that the protagonist Regional Groups had with one another's positions. It also helped further to consolidate the somewhat amorphous Like-minded Group, which the author continued to lead. The author

assisted this consolidation process by writing an analysis of the informal negotiations of Vienna and of the draft text of the protocol; and distributing this by e-mail to the members of the Like-minded Group before the final negotiations by the Extraordinary COP.

From 30 November-3 December 1999, the Miami Group of countries, led by the United States, made an attempt to have a decision on trade in LMO commodities passed in the Seattle Ministerial Session of the World Trade Organization. The author went to Seattle and lobbied, primarily amongst African delegations, against allowing this to happen. Others from other parts of the world also lobbied the delegations which they could reach. The result was that the WTO did not accept the passing of any decision on trade in LMO commodities. In fact, the ministerial negotiations as a whole collapsed;[29] and the author remains convinced that the issue of LMO commodities contributed to that general collapse.

As a result of all this, the Miami Group decided to negotiate on LMO commodities seriously in the Biosafety protocol. The final negotiations by the Extraordinary COP were made in Montreal on 24-28 January 2000, and the text of the Cartagena Protocol on Biosafety was agreed. This final negotiation session of the Extraordinary COP was also difficult.

The negotiations on LMO commodities were primarily between the Miami Group and the Like-minded Group. The European Union negotiators, presumably confident that their internal laws were robust enough to protect them from unwanted LMO commodities, were, though supportive of the Like-minded Group, not going to fight much on the issue. On the other hand, they were very keen on having clear provisions on labeling LMOs and LMO products in the protocol. The Miami Group continued to oppose labeling, the Precautionary Principle and the treatment of products of LMOs as an issue. Both the Miami and European Union Groups continued to oppose any meaningful negotiations on liability and redress.

The Like-minded Group had been wishing to join forces with the European Union to push for more secure and transparent product labelling. The prevaricating attitude of the Brazilian delegation had prevented this so far. In this session, however, the Brazilian delegation also became supportive of labelling. Nevertheless, the author decided to hold back on the issue until sure that the European Union delegations would support the Like-minded Group until the negotiations on LMO commodities were finalized; which they did. The result was the somewhat clumsy compromise we struck with the Miami Group that is now in Article 11 of the Cartagena Protocol.

[29] In November 1999 the World trade Organization Ministerial Conference attempted to meet in Seattle in order to launch a new round of trade negotiations. In the face of sustained protests by anti-globalization protestors in the streets of Seattle – the protests being dubbed the 'Battle for Seattle' – the Ministerial Conference was abandoned.

The Like-minded Group also wanted the Scope of the Protocol (Article 4) to include all LMOs and not explicitly to exclude any categories of LMOs. Though we realized, since the Miami and European Groups were united on the issue, that pharmaceuticals (Article 5 of the Protocol) and transit and contained use (Article 6 of the Protocol) would not be subject to the advance informed agreement procedure (Articles 7-10 of the Protocol) fully under the Protocol as we wanted them, we did not want these exceptions to be made at the level of the scope of the Protocol (Article 4). We wanted to make it always possible for the Protocol to consider all LMOs. Therefore, because the Miami Group wanted a separate provision on LMO commodities and the European Union wanted labelling, we managed to bargain (obstinately!) with them both to accept an all inclusive scope (Article 4).

The European Union negotiators had changed their position since the failed negotiations of Cartagena and, with the support of the Like-minded Group, they pushed for the Precautionary Principle (Articles 10(6) and 11(8) of the Protocol). The Miami Group had thus to accept the Precautionary Principle. The author suspects that it was the unprecedented collapse of the WTO negotiations in Seattle, not only the unity between the European Union and the Like-minded Groups, that forced them to give up their wish that the Protocol not be subjected to the Precautionary Principle.

As already pointed out, LMOS that are in transit through a country are not subject to the advance informed agreement procedure (Article 6(1) of the Protocol). The Like-minded Group did not want this exception. The compromise that was forced on us was that of being allowed to prohibit, through the Biosafety Clearing-House, those specific LMOs that a state considered particularly dangerous. This will require capacity to access information through the Biosafety Clearing-House; and also alertness to place objectionable LMOs in the Biosafety Clearing-House. Such capacity is often lacking in developing countries and it will have to be developed.

Excluding contained use from the advance informed agreement procedure was unacceptable to the Like-minded Group. Norway proposed that agreement could be reached on the issue if the definition (of what constitutes 'contained use') were to be legally left to the country of import. This made it possible for Article 6(2) to be formulated in a way which we could accept.

Unlike the Miami and European Union Groups, we wanted LMO pharmaceuticals for human use also to be subjected to the advance informed agreement procedure. We were convinced that there were (and that there still are) no 'other relevant international agreements or organizations' that are responsible for LMOs that are pharmaceuticals for humans. Therefore, these LMOs must be governed by the Cartagena Protocol. It thus became possible for us to accept Article 5 of the Protocol as a compromise. This will, however, require alertness in the World Health Organization, and possibly also in other *for a*, so that rules on LMO pharmaceuticals for humans

that violate the advance informed agreement procedure are not adopted anywhere. It should be noted that, because Article 5 of the Protocol is restricted to pharmaceuticals for humans, pharmaceuticals for animals have to be subjected to the advance informed agreement procedure (Articles 7-10) of the Protocol.

The Miami Group and some members of the European Union opposed the position of the Like-minded Group on products of LMOs; and we were therefore forced to give it up. However, the Risk Assessment Annex (Paragraph 5 of Annex III) enables the assessment of risks posed by LMO products. This, in combination with national laws on environment and health, can fill the gap created.

The most important deficiency of the Protocol as far as developing countries are concerned is in the absence of provisions to govern liability and redress. A promise was made to continue negotiations after the coming into force of the Protocol (Article 27), and the Like-minded Group felt that this promise was all that the negotiations of the Protocol could yield and accepted the negotiations of the Protocol as finalized.

Another issue left pending by the Protocol in spite of the push by the European Union, towards the end of the negotiations supported by the Like-minded Group, was that of packaging and labelling (Article 18, paragraphs 2(a) and 3). This was the last issue to be negotiated before the Cartagena Protocol on Biosafety was adopted by the Extraordinary COP at about 06h00 on 29 January 2000 after an all night session.

2.5 Negotiations on issues left pending by the Cartagena Protocol on Biosafety

Article 27 of the Protocol stipulates that, at its first meeting, the Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol shall 'adopt a process with respect to the appropriate elaboration of international rules and procedures in the field of liability and redress for damage resulting from transboundary movement of' LMOs. Through its Decision BS-1/8,[30] the first Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol on Biosafety, which convened in February 2004, adopted the terms of reference of an Open-ended Ad Hoc Working Group of legal and technical experts to negotiate a liability and redress regime for the Protocol. The Working Group has already held two negotiations sessions in May 2005 and in February 2006. Article 27 of the Protocol requires that the Working Group endeavour to complete its negotiations within four years, i.e. before February 2008.

[30] CBD Secretariat, Handbook of the Convention on Biological Diversity, (CBD, 3rd ed. 2005) at 1333 and at 1408-1411.

The second issue left pending at the adoption of the Protocol has two components. The first component (Article 18(2)(a) of the Protocol) requires the Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol on Biosafety to take a decision on the detailed labelling of LMO commodities 'no later than two years after the date of entry into force of this Protocol.' The Protocol entered into force on 11 September 2003. A labelling scheme should, therefore, have been finalized at the second meeting of the Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol on Biosafety, which took place in May-June 2005. However, New Zealand and Brazil prevented the meeting from reaching a consensus on labelling requirements for LMO commodities. Therefore, the issue was taken up again in the third meeting, which took place in March 2006. Brazil was found to have changed its previous position and to be asking for a labelling system that gave sufficient detail; as all of the other Parties, except for New Zealand and the members of the Miami Group, which are all non-parties, had been doing. Apparently, New Zealand has laws that prohibit LMO commodities from entering its territories. The New Zealand delegation was, therefore, obviously acting on behalf of the Miami Group. As a Party to the Protocol, New Zealand could block consensus but, since they are Non-parties, the Miami Group of countries could not. This made it possible for campaigning by non-governmental organizations in New Zealand. Many letters were written to the Prime Minister of New Zealand by concerned people and organizations from all over the world. In this way, the New Zealand delegation in the meeting in Curitiba was forced into silence, presumably because of an order from home. Therefore, in spite of attempts by the Miami Group to prevent it, a decision was passed which requires detailed labelling of LMO commodities.[31] The second component (Article 18(3) of the Protocol) requires the Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol on Biosafety to evaluate the need for and modalities of developing standards for the packaging and transport of LMOs. The completion of this requirement is not time-bound. The process started in the third meeting in Curitiba,[32] and it may be a few years before it is finalized.

3. A brief evaluation of the appropriateness of the provisions of the Cartagena Protocol on Biosafety

In evaluating the provisions of the Cartagena Protocol on Biosafety, the author needs first to state the starting premises of this paper:

[31] Report of the Third Meeting of the Conference of the Parties to the Convention on Biological Diversity serving as the Meeting of the Parties to the Cartagena Protocol on Biosafety, Decision BS/111/10, UN Doc. UNEP/CBD/BS/COP-MOP/3/15 (2006) at 60-62.

[32] *I bid* at 58.

a) Since, once released into the environment, LMOs cannot be recalled, strict adherence to the Precautionary Principle is required for biosafety.
b) Since, on the whole, the number of living species increases towards the equator, unforseen impacts of LMOs also increase towards the equator. This means that risk assessment becomes more complex towards the equator.
c) Since the countries with the least scientific capacities are found towards the equator, mistakes in both risk assessment and risk management are likely to increase towards the equator.
d) Since the poorest countries are found towards the equator, mistakes in managing LMOs are likely to be most devastating towards the equator.
e) Since, on the whole, the number of species increases towards the equator, the possibilities of solving perceived problems of development by choosing from among the diverse varieties of the species available, rather than trying to create transgenic organisms, increases towards the equator. This makes genetic engineering less relevant towards the equator.

Starting from these premises, the author can point out the following difficulties with the main provisions of the Protocol.

3.1 General provisions

Article 2(4) begins by stating that any Party can take action more protective than the Protocol. However, it then weakens this possible action by qualifying it. It specifies that such action must be consistent with the objective and the provisions of the Protocol. The objective of the Protocol (Article 1) is broad and would thus allow a lot of room. But the provisions are of necessity much more detailed and they thus restrict the more protective action that can be taken. Article 2.4 also allows international law, e.g. on trade, to restrict the more protective action that can be taken.

3.2 The scope

The scope of the Protocol (Article 4) is good. But Article 5 weakens it when it comes to LMOs that are pharmaceuticals for humans. It does so by making it essential, especially for the countries with least wealth and scientific capacity, actively to watch the World Health Organization and other international institutions lest they institute procedures or laws that bypass the advance informed agreement procedure. Article 6 similarly weakens the scope with regards to LMOs in transit and LMOs for contained use.

3.3 LMO commodities

Although the provisions of Article 11 of the Protocol make the advance informed agreement the basis of decision taking in importing LMO commodities, the notification process takes place *via* the Biosafety Clearing-House (Articles 11(1), 11(6)).

This requires a well developed capacity even in a poor importing country. It would have helped poor importing countries if LMO commodities had been treated in the same way as LMOs intended for direct release into the environment (Articles 7-10).

3.4 Simplified procedure

Article 13 of the Protocol allows the simplification of the advance informed agreement procedure in dealings between Parties that want to do so. This opens poor developing countries to pressure from rich and powerful countries that produce LMO commodities to accept simplified procedures, and thus weakens the applications of the Precautionary Principle.

3.5 Bilateral, regional and multilateral agreements and arrangements (Art. 14) and non-parties (Art. 24)

Article 14 of the Protocol, especially in combination with Article 24, can also be used to lower protection in weaker countries. For example, Mexico, though a Party to the Protocol, has had to opt out of the labelling requirements finalized in the third meeting of the Conference of the Parties to the Convention on Biological Diversity serving as the meeting of the Parties to the Cartagena Protocol by insisting on including Paragraph 4(f) of the Decision BS/III/10. This was because Mexico is a member of the North American Free Trade Area and thus has to import unlabeled LMO commodities from the United States and Canada. It can be expected that the United States will insist on similar concessions when it makes bilateral or multilateral agreements with other Parties to the Protocol.

3.6 Confidential information

Article 21 of the Protocol allows for an exporter of an LMO to ask for any of the items of information it supplies the importer to be kept as confidential. Although this same Article 21 allows the importer to refuse keeping confidential information that is necessary for biosafety, it makes this refusal conditional upon giving reasons. Again this may subject a poor importing country to complications that it has little capacity to deal with. The consequence is then likely to be that it will accept to treat as confidential information that is important for ensuring biosafety.

3.7 Socio-economic considerations

Article 26 of the Protocol allows importing Parties to 'take into account, consistent with their international obligations, socio-economic considerations arising from the impact of' LMOs when deciding to import or reject those LMOs.' For a poor developing country, socio-economic considerations should have a very high weight in decision taking on whether to import a given LMO or not, especially when that

LMO is a commodity. However, Article 26 diminishes this weight by invoking 'international obligations'.

4. Concluding remarks

The Cartagena Protocol on Biosafety is the first environmental international law negotiated to pre-empt possible problems with the entirely new technology, recombinant DNA technology. That is arguably why it is also the first environmental international law that is based on the Precautionary Principle. It is not surprising, therefore, that the process of negotiating it has been very divisive. It is equally not surprising that it satisfies nobody completely. Time will show whether negotiating it has set a good precedent for ensuring the safety of emerging new technologies, for example nanotechnology.

National Implementation of the Convention on Biological Diversity

Ahmed Djoghlaf [1]

1. Introduction

The Convention on Biological Diversity (CBD)[2] is an instrument for sustainable development: it is the principal international legal framework for addressing the issue of biodiversity and the first international treaty to take a holistic, ecosystem-based approach to the conservation and sustainable use of biological diversity. The Convention was negotiated from 1989 to 1992 as an integral part of the preparatory process for the United Nations Conference on Environment and Development (UNCED)[3] and was opened for signature at the latter Conference. Together with Agenda 21[4] and other instruments adopted at UNCED,[5] it is one of the pillars supporting international efforts for a sustainable future. The objectives of the Convention are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of benefits arising from the utilization of genetic resources.[6] One of the striking developments in the Convention process over the last decade since Rio has been the increased realization of the importance of these objectives in achieving economic growth and poverty eradication.

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2 Convention on Biological Diversity, 31 *International Legal Materials* (1992) 822. It was adopted at the Conference for the Adoption on the Agreed Text of the Convention in Biological Diversity in Nairobi on 22 May, 1992 and entered into force on 29 December 1993. See also <http://www.biodiv.org>.

3 The UNCED was held in Rio de Janeiro, Brazil, from 3 to 14 June 1992.

4 Agenda 21, UN Doc. A/CONF.151/26/REV.1, Vol. 1, (1992). Agenda 21 is the first comprehensive programme for global action in all areas of sustainable development.

5 UN Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849; Declaration on Environment and Development ('Rio Declaration'), UN Doc. A/CONF.151/26/REV.1, Vol. 1, (1992), and the Statement of Forest Principles, UN Doc. A/CONF.151/26, Vol. III, (1992).

6 See Article 1 of the CBD.

The Convention has currently 190 Parties, i.e. 189 State Parties and the EC being a regional economic integration organization as the 190th Party[7]. Thus, the CBD is one of the most highly subscribed international treaties in the field of the environment and is a quasi-universal.

The Convention is a framework instrument laying down broad goals, key objectives and general principles which are to be operationalized through concrete measures at the national level. Since 1992, the Contracting Parties have collectively further developed these commitments through decisions of the Conference of the Parties (COP) – which is the Convention's governing body – and have taken steps necessary to translate the broad goals, key objectives and general principles of the Convention into practical action. These measures have included, among other things, the successful negotiation and adoption of the Cartagena Protocol on Biosafety,[8] the adoption of programmes of work for a number of thematic areas and cross-cutting issues,[9] the adoption of guidelines and guiding principles,[10] the issuance of specific guidance for funding of biodiversity projects through the financial mechanism established under the Convention[11] and the establishment of various temporary ('ad hoc') bodies to focus on the implementation of specific provisions of the Convention, such as those relating to access to genetic resources and benefit-sharing, and traditional knowledge, innovations and practices.[12]

2. National implementation

The COP has stressed that the development and implementation of national biodiversity strategies and action plans (NBSAPs) constitute the cornerstone of national implementation of the Convention.[13] The CBD requires Parties to develop national strategies, plans or programmes for the conservation and sustainable use of biodiversity; or to adapt existing plans or programmes for this purpose.[14]

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7 See <http://www.biodiv.org/world/parties.asp> (visited 16 May 2007).

8 Cartagena Protocol on Biosafety, Montreal, 29 January 2000, in force 11 September 2003, 39 *International Legal Materials* (2000) 1027. See also <http://www.biodiv.org/biosafety/default.aspx>.

9 See <://www.biodiv.org/programmes/default.shtml> (visited 16 May 2007).

10 For example, the Guiding Principles for the Prevention, Introduction and Mitigation of Impacts of Alien Species that Threaten Ecosystems, Habitats or Species; the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable sharing of the Benefits Arising out of Their Utilization; the Addis Ababa Principles and Guidelines for the Sustainable Use of Biodiversity, the Guidelines on Biodiversity and Tourism Development; the Akwé: Kon Voluntary Guidelines for the Conduct of Cultural, Environmental and Social Impact Assessment regarding Developments Proposed to Take Place on, or which are Likely to Impact on, Sacred Sites and on Lands and Waters Traditionally Occupied or Used by Indigenous and Local Communities; the Voluntary Guidelines on Biodiversity-Inclusive Impact Assessment. For a full list and associated texts, see <http://www.biodiv.org/doc/guidelines.shtml> (visited 16 May 2007).

11 See Article 20, 21 and 39 of the CBD as well as <http://www.biodiv.org/financial/default.shtml> (visited 16 May 2007) .

12 See <http://www.biodiv.org/convention/default.shtml> (visited 16 May 2007) under Convention Bodies.

13 COP decision VI/27.

14 Article 6 (a) of the CBD.

The CBD's financial mechanism has supported 145 countries in the preparation of their national biodiversity strategies and action plans.[15] 82 of the 153 developing country Parties, or Parties with economies in transition, have completed the preparation of their NBSAPs. 25 developed country Parties have developed an NBSAP or adapted existing strategies to meet their commitments under the Convention.[16]

With regard to procedures for developing NBSAPs, ideally, a national strategy or action plan reflects how a specific country intends to fulfill the objectives of the Convention in light of its specific national circumstances, and the related action plan constitutes the sequence of steps to be taken to meet these goals.

Procedures recommended by the Conference of the Parties for developing national biodiversity strategies and action plans usually start with the need to identify the biodiversity within the country and assess its status, if this has not already been done. With this assessment, and having identified an institutional framework and operational responsibilities, the strategy can then be developed to address the three objectives of the Convention in the light of national circumstances.

Despite the differences between Parties, many of the NBSAPs are very similar in structure and contain a similar level of detail. For most Parties, developing a national biodiversity strategy has involved:

- establishing the institutional framework for developing the strategy, including designating leadership and ensuring a participatory approach;
- allocating or obtaining financial resources for the strategy process;
- assessing the status of biological diversity within its jurisdiction;
- articulating and debating the vision and goals for the strategy through a national dialogue with relevant stakeholders;
- comparing the actual situation to the objectives and targets;
- formulating options for action that cover key issues identified;
- establishing criteria and priorities to help choose from among options; and
- matching actions and objectives.[17]

Developing and implementing the national biodiversity action plans generally involves:

- establishing priorities and targets;
- assigning roles and responsibilities;
- agreeing the tools and approaches to be used;

[15] See <http://www.biodiv.org/reports/nbsap.aspx> (visited 16 May 2007).
[16] See <http://www.biodiv.org/reports/list.aspx?type=nbsap> (visited 16 May 2007).
[17] Adapted from Roy T. Hagen, 'A guide for Countries Preparing National Biodiversity Strategies and Actions Plans', Biodiversity Planning Support Programme, UNDP/GEF (1999), available at <http://www.undp.org/bpsp/nbsap_guidelines/docs/NBSAP_Guide_(Hagen)_at_24IX99.doc> (visited 5 March 2007).

- establishing timeframes and deadlines for completion of tasks;
- obtaining the budget;
- agreeing indicators and measurable targets against which progress can be assessed;
- determining reporting responsibilities, intervals and formats; and
- establishing procedures for incorporating lessons learned into the revision and updating of the strategy.[18]

Constraints in the biodiversity planning process though exist. Specific problems identified by Parties across the globe in the biodiversity planning process include:

- inadequate political support for crucial aspects of the planning process and for approval of action;
- weak legislative bases;
- inadequate information;
- the lack of appropriate scientific and technical expertise and experience in biodiversity planning;
- the lack of institutional coordination within Governments, and between Governments and non-governmental stakeholders;
- difficulties in access to and availability of funding;
- direct economic pressure on ecosystems and a lack of national budget allocations;
- the need for increased public education and awareness;
- the need for recognition of the long-term nature of the NBSAP process;
- the complexity of translating a biodiversity strategy into a costed and prioritized action plan; and
- the scarcity of examples of the effective integration of biodiversity considerations into sectoral or cross-sectoral planning.[19]

However, the NBSAPs have resulted in the development of national biodiversity legislation in many countries. Legislation has a critical role to play in the effective implementation of national biodiversity policies. Firstly, it translates policy into specific enforceable norms, that is, it is an instrument for policy implementation. Secondly, it provides a framework for the planning and allocation of environmental resources – a planning framework backed by law is critical in situations of competing development imperatives, especially in developing countries. Lastly, legislation

[18] Adapted from: Fernández, J. J. García, Guide for the Preparation of Action Plans within the Framework of the Convention on Biodiversity, UNEP & GEF (1998), available at <http://www.undp.org/bpsp/nbsap_guidelines/docs/BSAPGUIDE_JJGFernandez.doc> (5 March 2007).

[19] Appendix to the CBD COP decision VI/26. The list contained in the Appendix and the text of the decision VI/26 itself follow, inter alia, conclusions of the Seychelles Workshop on the Strategic Plan (UN Doc. UNEP/CBD/WS-StratPlan/5 (2001)) and the report of the Open-ended Inter-Sessional Meeting on the Strategic Plan, National Reports and Implementation of the Convention on Biological Diversity (UN Doc. UNEP/CBD/COP/6/5 (2001)).

provides a mechanism for dispute resolution regarding access to, and utilization of, biodiversity resources.

Several countries have developed stand-alone biodiversity legislation as a response to the requirements of the CBD. These include India, Costa Rica, Bangladesh, Bhutan, Bulgaria, Peru, Philippines, South Africa and Venezuela. Other countries have included biodiversity components in their national environmental legislation. Examples include Kenya, Uganda, Malawi, Indonesia, Vietnam and Australia.

With regard to mainstreaming biodiversity in key sectors, the CBD requires Parties to integrate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.[20]

Most countries recognize the importance of integrating biodiversity into other sectors, in particular agriculture and forestry. Mechanisms such as land-use planning systems are widely being put in place to achieve this. Some countries have clearly made significant efforts to include stakeholders in the development of NBSAPs, and it appears that a wide range of sectors and interests are involved in the implementation of action plans. In most cases, a steering or coordination group has been set up, usually under the auspices of the ministry of environment or its equivalent. These groups mainly comprise representatives of the relevant ministries, research institutes and non-governmental organizations. Some countries mention the involvement of different levels of government, and others stress the involvement of trade, industry and the private sector. The development of cross-sectoral responsibility clearly emerges as a key issue, to be addressed through collaborative development of NBSAPs and the implementation of resultant policies and laws.

Generally, however, although many countries have made a start on integrating biodiversity concerns into mainstream economic sectors, notably in those sectors most immediately associated with biodiversity such as forestry, fisheries and agriculture, much more needs to be done; particularly in areas that traditionally are economically and politically dominant, such as industry, trade and transport.

There are many actors involved in the implementation of the CBD. Although States have primary responsibility with regard to its implementation, the Convention is a vast undertaking requiring actions on many fronts and by a host of numerous actors at the global, regional and national levels. The Convention therefore calls upon Parties to support the conservation efforts of local populations,[21] to encourage cooperation with the private sector[22] and to cooperate with other States and relevant international or regional organizations on a number of issues. Moreover, biodiversity is essentially a local issue. It is activities at the local level that have the greatest impact

[20] Article 6(b) of the CBD.
[21] Article 10(d) of the CBD.
[22] Article 10(e) of the CBD.

on biodiversity. Also, conservation and sustainable use measures are implemented by actors at the local level. The contribution of local populations - indigenous and local communities, women and the youth - is crucial to effective implementation. In addition, the private sector, local authorities, non-governmental organizations and community-based organizations play an important role in national implementation. The Strategic Plan of the Convention therefore calls for broader engagement across society in implementation of key actors and stakeholders and the promotion of education, and public awareness.[23]

Monitoring compliance and assessing implementation is clearly of vital importance to the success of the CBD. To monitor compliance with Convention obligations, Art. 26 requires Parties to submit to the COP, on a regular basis, national reports on measures taken to implement the provisions of the Convention and the effectiveness of these measures in meeting its objectives. The COP provides guidance regarding reporting intervals, and the nature, structure and content of the reports.[24]

The Convention does not have a non-compliance procedure. It is, however, possible for the COP to assess the extent of compliance by Parties on the basis of the national reports.

The first national reports were due at the end of 1998, and 132 reports were submitted. The second national reports were due 15 May 2001. Thereafter, national reports were to be submitted for consideration at alternate ordinary meetings of the COP.[25] The Secretariat received 109 reports. With regards to the third national report, Parties were urged to submit their reports before 1 September 2006. So far 93 reports have been submitted.[26] These national reports provide summaries of the status of biodiversity; threats to it; the legal and policy framework for action; and the institutions responsible for action. The reports contain detailed information on Parties' efforts to implement the Convention, including the amount of resources available for the implementation, the capacity building needs of the Party, and nature of the plans and guidelines implemented.[27]

The reports are based on an extensive planning and assessment exercise, which has been supported by the financial mechanism[28]. Collectively, the process of producing

[23] See COP decision VI/26, Annex, C. Goal 4.

[24] See e.g. COP decision II/17; COP decision III/9; COP decision V/19, paras 5-8; COP decision VI/25 A, paras 3-6, section B, 4, 5 and 8.

[25] COP decision V/19, para. 5.

[26] For updated information consult the national reports analyzer at <http://www.biodiv.org/reports/analyzer.aspx> (visited 16 May 2007).

[27] See <http://www.biodiv.org/reports/list.aspx?type=all> (visited 16 May 2007), where you have direct access to the different national reports submitted by Parties.

[28] The financial mechanism of the Convention, operated by the Global Environment Facility (GEF), has supported biodiversity enabling activities in over 140 developing country Parties and Parties with economies in transition. These have received support for the preparation of national biodiversity strategies and action plans (NBSAPs) and the preparation of first and second national reports. For more information see <http://www.biodiv.org/reports/default.aspx> (visited 16 May 2007).

the reports, which has engendered the development of national biodiversity strategies and action plans (NBSAPs) in almost every country in the world, represents the most extensive planning exercise addressing biodiversity to date.

One of the key functions of the Conference of the Parties is to keep under review the implementation of the Convention.[29] In this respect the Conference of the Parties has established the Ad Hoc Open-ended Working Group on Review of Implementation. The object of the Working Group is to consider progress in the implementation of the Convention and its Strategic Plan and to consider ways and means of identifying and overcoming obstacles to effective implementation.[30]

The Conference of the Parties has also urged all Parties to develop a set of national-level biodiversity indicators, as part of their NBSAPs for assessing national implementation and progress towards the achievement of globally agreed targets.[31] At the global level, the COP has developed a set of indicators for assessing progress towards the 2010 biodiversity target as guidance to Parties.[32]

3. Financing national implementation

The financing of implementation is another vital issue that needs to be considered. One of the key strategic goals of the Convention's Strategic Plan[33] adopted in 2002 is to ensure that Parties improve their financial, human, scientific, technical and technological capacities to implement the Convention. Many developing countries and countries with economies in transition operate under significant resource constraints. In addition, biodiversity conservation is often a low priority in national budgeting processes, given the enormous socio-economic problems in these countries.

The Convention establishes a financial mechanism for the provision of financial resources to developing countries, intended to facilitate the implementation of their commitments under the Convention. The Global Environmental Facility (GEF),[34] as the institutional structure operating the financial mechanism of the Convention, has made significant contributions to the progress in implementation of the Convention by developing country Parties. The GEF provides financing for activities consistent with the policies and programme priorities established by the Conference of the Parties. To date, the Conference of the Parties has communicated to the financial mechanism over sixty elements of guidance which cover some twenty-five major areas or issues under the Convention[35] - a considerable number, but also an

[29] Art. 23(4) of the CBD.
[30] See COP decision VII/30, para. 23.
[31] See, inter alia, COP decisions VI/8, para. 8 or VII/30, para. 16.
[32] See COP decision VII/30, paras 3 to 10 and Annex I.
[33] See COP decision VI/26, Annex, C., Goal 2.
[34] See <http://www.gefweb.org>.
[35] See COP decisions I/2, II/6, III/5, IV/13, V/12, V/13, VI/16, VI/17, VII/20 and VIII/18.

indication of the wide scope of the Convention and the need for action on many fronts for its objectives to be achieved.

Between 1992 and 2006, the GEF directly financed over US$2.2 billion for biodiversity- and biosafety-related projects. In addition, the GEF has to date mobilized in excess of US$5.4 billion in co-financing for biodiversity and biosafety projects.[36] Sources of co-financing range from government counterpart contributions, which include in some cases local government funding; bilateral and other multilateral donors; and internal funding from the GEF Implementing Agencies.

4. Constraints to national implementation

The Convention process has, on the basis of the lessons learned over the past decade or so, identified a number of obstacles to the effective implementation of the Convention. These have been grouped by the Conference of the Parties into eight major categories.[37]

1 **Political/societal obstacles**

- A lack of political will and support to implement the Convention on Biological Diversity;
- limited public participation and stakeholder involvement;
- a lack of mainstreaming and integration of biodiversity issues into other sectors, including use of tools such as environmental impact assessment;
- political instability; and
- a lack of precautionary and proactive measures, causing reactive policies.

2 **Institutional, technical and capacity-related obstacles**

- Inadequate capacity to act, caused by institutional weaknesses;
- a lack of human resources;
- a lack of transfer of technology and expertise;
- the loss of traditional knowledge; and
- the lack of adequate scientific research capacities to support all the objectives.

3 **Lack of accessible knowledge/information**

- Loss of biodiversity and the corresponding goods and services it provides not being properly understood and documented;
- existing scientific and traditional knowledge not being fully utilized;

[36] Global Environment Facility Secretariat note on the Work Program Doc. GEF/C.28/6 (2006).
[37] See COP decision VI/26, Appendix: Obstacles to the implementation of the Convention on Biological Diversity.

- dissemination of information on both the international and national levels not being efficient; and
- a lack of public education and awareness at all levels.

4 **Economic policy and financial resources**
- A lack of financial and human resources;
- fragmentation of GEF financing;
- a lack of economic incentive measures; and
- a lack of benefit-sharing.

5 **Collaboration/cooperation**
- A lack of synergies at both the national and international levels;
- a lack of horizontal cooperation among stakeholders;
- a lack of effective partnerships; and
- a lack of engagement on the part of the scientific community.

6 **Legal/juridical impediments**
- A lack of appropriate policies and laws.

7 **Socio-economic factors**
- Poverty;
- population pressure;
- unsustainable consumption and production patterns; and
- a lack of capacities for local communities.

8 **Natural phenomena and environmental change**
- Climate change; and
- natural disasters.

5. Conclusion

As shown above, the national implementation of the Convention faces some important challenges. Not only the political will, but also, inter alia, the lack of resources, of information, of appropriate legal frameworks and different socio-economic factors like poverty, challenge the effective implementation of the Convention at national level. However, as was pointed out, biodiversity is first and foremost a local issue. The Convention's implementation at national level, therefore, is a cornerstone for the Convention's ultimate success. The Parties to the Convention are aware of this great responsibility. Having entered the phase of enhanced implementation of the Convention, the COP developed extensive guidance on national implementation, which is reflected in various COP decisions. Moreover, the financial mechanism of the Convention provides support for the preparation of national reports by developing country Parties and countries with economies in transition. Hand in hand with

co-operation in research and training, public education, access to and transfer of technology, capacity-building, exchange of information, the country Parties to the Convention will make its national implementation more and more effective and will overcome some of the obstacles identified above. To this end, the Secretariat will spare no effort in fulfilling its mandate through various initiatives, the sharing of good practices, case-studies, manuals, and guidelines, using the clearing-house mechanism, as well as other relevant tools. The Secretariat will also strengthen its technical support to Parties as set out in this article.

Establishing a National Policy Framework for Implementation of the Convention on Biological Diversity

Elizabeth Maruma Mrema[1]

1. Introduction

The Convention on Biological Diversity (CBD) was opened for signature on 5 June 1992 at the United Nations Conference on Environment and Development in Rio de Janeiro and entered into force on 29 December 1993.[2] Currently, there are 190 Parties to the CBD.[3] The objectives of the CBD are threefold: 'firstly, the conservation of biological diversity; secondly, the sustainable use of its components; and, thirdly, the fair and equitable sharing of the benefits arising out of the utilization of genetic resources.'[4]

The CBD is not a self-executing treaty. Parties therefore need to develop and adopt national implementation measures to make the treaty operational within their domestic legal systems. Additionally, many of the CBD's specific obligations require Parties to make changes to, and/or to amend, their existing national laws, regulations, policies, strategies, and programmes.[5]

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[2] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>.

[3] Convention on Biological Diversity, Parties to the CBD, <http://www.biodiv.org/world/parties.asp> (visited 4 April 2007).

[4] Art. 1.

[5] Arts 6, 10(a), and 11.

For example, Article 6 on General Measures for Conservation and Sustainable Use requires Parties to:

a. Develop national strategies, plans or programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes which shall reflect, *inter alia*, the measures set out in this Convention relevant to the Contracting Party concerned; and
b. integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.[6]

Additionally, Article 10(a), on Sustainable Use of Components of Diversity, requires Parties to 'integrate consideration of the conservation and sustainable use of biological resources into national decision-making'.[7] Article 11, on Incentive Measures, requires Parties to 'adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity.'[8]

In addition, Parties are required to fulfil many individual and more specific obligations of the CBD, which include: establishing a system of protected areas;[9] establishing and maintaining facilities for *ex situ* conservation;[10] identifying and monitoring components of biological diversity and the processes and activities that are likely to have significant adverse impacts on conservation and sustainable use;[11] and introducing appropriate procedures for environmental impact assessments.[12] Others include: ensuring that access to genetic resources, when granted, is based upon mutually agreed terms and is subject to prior informed consent;[13] and establishing programmes for scientific and technical education and training in identification, conservation, and sustainable use of biological diversity.[14] Consequently, in order to meet these obligations and achieve the CBD's three objectives, Parties must establish a broad and comprehensive national policy framework for implementation of the CBD.

This paper proceeds with an elaboration of how an ideal national implementation for the CBD might be achieved. This part is followed by an assessment of the current status of national implementation of the CBD; based on the national reports submitted so far in response to specific questionnaires prepared and submitted to the Parties by the CBD Secretariat. In addition to the assessment from the national

[6] Art. 6.
[7] Art. 10(a).
[8] Art. 11.
[9] Art. 8(a).
[10] Art. 9(a).
[11] Art. 7(a)-(c).
[12] Art. 14(1)-(2).
[13] Art. 15(4)-(5).
[14] Art. 12(a).

reports, an overview of an independent analysis of the status of national implementation is provided. A review of national CBD-implementing legislation developed so far by at least nine Parties to the CBD has been made; with an identification of the strengths and weaknesses of, or gaps in, each of example. It is hoped that such a review will assist and serve as a lesson for other Parties to CBD intending to develop overarching and comprehensive national biodiversity legislation; for implementation of not only the CBD but also other biodiversity-related conventions. The Paper concludes with suggestions on the way forward to establishing an effective national policy framework for the implementation of the CBD. This is done through an identification of the major obstacles and challenges, as analyzed in the Paper; and ends with suggestions for possible future actions, for consideration by the Parties as they deal with different challenges in the development and implementation of their national policy frameworks for the enforcement of the CBD.

2. Achieving ideal national implementation

At the 6th Conference of the Parties (COP) in 2002, the Parties adopted Decision IV/26: the *Strategic Plan for the Convention on Biological Diversity* ('Strategic Plan'). The Strategic Plan includes several goals and objectives to guide the implementation of the CBD at the national, regional, and global levels, in order to achieve its mission. The Strategic Plan's mission is that:

> 'Parties commit themselves to a more effective and coherent implementation of the three objectives of the Convention, 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.'[15]

Goal 3 of the Strategic Plan relates to effective frameworks for implementation; and describes the ideal paradigm for national implementation. It states that, ideally, '[n]ational biodiversity strategies and action plans (NBSAPs) and the integration of biodiversity concerns into relevant sectors serve as an effective framework for the implementation of the objectives of the Convention.'[16] Subparts 3.1, 3.3, and 3.4 provide further illustration; stating that, in the ideal situation

> '[e]very Party has effective national strategies, plans and programmes in place for implementing the three objectives of the Convention and to set clear national priorities… [b]iodiversity concerns are being integrated into relevant national sectoral and cross-sectoral plans, programmes and policies… [and t]he priorities in national

[15] Sixth Conference of the Parties to the Convention on Biological Diversity, Decision VI/26: Strategic Plan for the Convention on Biological Diversity [Strategic Plan], Part. B., UN Doc. UNEP/CBD/COP/6/20 (2002).

[16] *Ibid.* at Part. C.

> biodiversity strategies and action plans are being actively implemented, as a means to achieve national implementation of the Convention, and as a significant contribution towards the global biodiversity agenda.'[17]

As an initial point of reference, out of 190 Parties, 131 have to date completed their NBSAPs, while fifty-seven have not completed theirs.[18]

3. The current status of national implementation

The current status of national policy frameworks for implementation of the CBD can be determined by assessing a number of different sources; such as the reports of the Parties themselves, analytical reports conducted by international institutions, and the national legislation that has been developed and adopted by a number of Parties.

3.1 Responses from the Third National Reports

The Seventh COP, in 2004, requested the Parties submit their Third National Reports to the COP through the Secretariat by 15 May 2005.[19] The Third National Reports consisted of the Parties' responses to a series of questions, prepared by the Secretariat and approved by the COP, regarding each of the CBD's obligations. The questions were designed to identify the levels of implementation; as well as common constraints and obstacles for effective implementation. As of 3 May 2006, eighty-two parties had submitted their reports to the CBD Secretariat.[20]

The CBD Secretariat has analyzed the reports it has received; and this analysis helps to illustrate the current status and extent of national implementation of the CBD by different Parties.[21] Question 12 of the Third National Report related to the implementation of Article 6 on General Measures for Conservation and Sustainable Use; and asked Parties: 'Has your country put in place effective national strategies, plans and programmes to provide a national framework for implementing the three objectives of the Convention?' Three Parties answered, 'No'; five answered, 'No, but relevant strategies, plans and programmes are under development'; forty answered,

[17] *Ibid.*

[18] Information is based on e-mail exchange with CBD Secretariat on 8 June. However, the number of NBSAPs that have been posted on the CBD website is considerably less than 131, and the Analysis of Biodiversity Enabling Activities conducted by the GEF reports that more NSBAPs have been completed (142).

[19] Seventh Conference of the Parties to the Convention on Biological Diversity, Decision VII/25: National Reporting, UN Doc. UNEP/CBD/COP/7/21 (2004).

[20] Letter to National Focal Points from Ahmed Djoghlaf, CBD Executive Secretary, Ref.: SCBD/NR/MC/54682, 3 May 2006, available at <http://www.biodiv.org/doc/reports/nr-03-status.pdf> (visited 4 November 2006).

[21] CBD National Reports Analyzer can be accessed at <http://www.biodiv.org/reports/analyzer.aspx> (visited 4November 2006).

'Yes, some strategies, plans and programmes are in place'; and twenty-six answered, 'Yes, comprehensive strategies, plans and programmes are in place'.

Question 70 related to Article 10(a) on Sustainable Use of Components of Diversity, and asked Parties: '[H]as your country integrated consideration of the conservation and sustainable use of biological resources into national decision-making?' Three Parties answered, 'No'; five answered, 'No, but steps are being taken'; thirty-eight answered 'Yes, in some relevant sectors'; and twenty-seven answered, 'Yes, in most relevant sectors'.

Question 83 related to Article 11 on Incentive Measures, and asked Parties: 'Has your country established programmes to identify and adopt economically and socially sound measures that act as incentives for the conservation and sustainable use of components of biological diversity?' Eleven Parties answered, 'No'; seven answered, 'No, but relevant programmes are under development'; forty-six answered, 'Yes, some programmes are in place'; and seven answered, 'Yes comprehensive programmes are in place'.

Other questions regarding the progress made in establishing a national policy framework for implementation included Questions 13 and 15. Question 13 asked: 'Has your country set measurable targets within its national strategies and action plans?' Nine Parties answered, 'No'; eighteen answered, 'No, measurable targets are still in early stages of development'; sixteen answered, 'No, but measurable targets are in advanced stages of development'; twenty-five answered, 'Yes, relevant targets are in place'; and nine answered, 'Yes, reports on implementation of relevant targets are available'. Question 15 asked: 'Has your country integrated the conservation and sustainable use of biodiversity as well as benefit sharing into relevant sectoral or cross-sectoral plans, programmes and policies?' Four Parties answered, 'No'; thirty-five answered, 'Yes, in some sectors'; twenty-nine answered, 'Yes, in major sectors'; and three answered, 'Yes, in all sectors'.

Although these responses present a relatively positive picture of current national implementation efforts, it is important to note that these responses are reported by the Parties themselves, and they have not yet been independently verified. Indeed, on 3 July 2006, during the *Third UNEP-University of Joensuu Course on International Environmental Law-making and Diplomacy*, many course participants[22] were surprised to learn how favourably their countries had responded to these questions on the status of their country's implementation of the provisions of the CBD. A number

[22] The third UNEP-University of Joensuu Course on International Environmental Law-making and Diplomacy was held at the University of Kwazulu-Natal, Pietermaritzburg, South Africa from 26 June to 7 July 2006 where the content of this Article was presented. Course participants were from the following countries: Argentina, Belgium, Botswana, Brazil, Bulgaria, Canada, Denmark, Ecuador, Finland, Germany, Ghana, Iran, Kenya, Kyrgyzstan, Latvia, Lesotho, Mexico, Namibia, Netherlands, Nigeria, Panama, Philippines, Senegal, South Africa, Sweden, Turkey, USA, Zambia, and Zimbabwe.

of them, who were involved at the national level with the implementation of the CBD, observed that they were not aware of many of the programmes and policies that their countries had reported were in place or in advanced stages of development. Others questioned the methodology used in the preparation of such Reports; and wondered how relevant national stakeholders were involved or participated in the preparation of their National Reports already submitted to the CBD Secretariat. Still others confirmed that, on many occasions, their National Reports, even for other environmental conventions, are prepared by one person with no participatory and consultative process for review of these.

At the very least, this reflects a need for greater internal communication, coordination, and collaboration within Parties. However, it may also signal a need for an independent review to be done of Parties' reports in order to ensure their accuracy. This review could potentially be conducted by the CBD Secretariat, by the United Nations Environment Programme (UNEP), or by other relevant organizations as mandated by the Parties. Other Multilateral Environmental Agreements (MEAs) do have mechanisms for independently monitoring Parties' national reports.

For example, the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)[23] provides that the Secretariat 'may be assisted by suitable inter-governmental or non-governmental international or national agencies and bodies technically qualified in protection, conservation and management of wild fauna and flora.'[24] It relies upon, for instance, the body Trade Records Analysis of Flora and Fauna in Commerce (TRAFFIC) to provide monitoring and verification assistance.[25] TRAFFIC is a joint project of the World Wildlife Fund (WWF) and the World Conservation Union (IUCN), which collects and analyses data regarding illegal wildlife trade. TRAFFIC disseminates this information through its journal, (*TRAFFIC Bulletin*), newsletter (*TRAFFIC Dispatches*), and special species-specific and/or region-specific reports.[26] TRAFFIC has a close working relationship with the CITES Secretariat;[27] it has been involved in CITES monitoring missions;[28] and it manages the CITES Elephant Trade Information System (ETIS) on behalf of

[23] Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington DC, 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* **243, <**http://www.cites.org>.

[24] Art. XII, para. 1.

[25] Glen Wiser, *Transparency in 21st Century Fisheries Management: Options for Public Participation to Enhance Conservation and Management of International Fish Stocks*, (Center for International Environmental Law 2000), 28, available at <http://www.ciel.org/Publications/trans21cenfisheriesmgmt.pdf> (visited 4 November 2006).

[26] TRAFFIC, Publications, <http://www.traffic.org/RenderPage.action?CategoryId=2> (visited 4 November 2006).

[27] TRAFFIC, About TRAFFIC, <http://www.traffic.org/about/priority_cites.html> (visited 4 November 2006).

[28] *E.g.:* CITES, Summary Report of the Thirty-second Meeting of the Standing Committee, 5 Nov. 1994, (rhinoceros horn trade in Oman, illegal fur trade in Nepal), available at <http://www.cites.org/eng/com/SC/32/E32-SumRep.pdf> (visited 4 November 2006).

the CITES Parties, in order to track illegal trade in ivory and other elephant products.[29]

Additionally, the Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (the Aarhus Convention)[30] allows non-governmental organizations to apply for observer status. Those that have observer status are able to nominate candidates for the Convention's Compliance Committee,[31] and all NGOs and members of the public are permitted to submit communications to the Compliance Committee alleging the non-compliance of a Party to the Convention.[32]

3.2 Independent analysis of the status of national implementation

Reports from the Parties are not the only way to take stock of the status of national implementation of the CBD. In March 2006, the Biodiversity Focal Area of UNEP's Division of Global Environment Facility released an unofficial document, an *Analysis on Biodiversity Enabling Activities* [*Analysis*],[33] which was based on a desk study review of project documents, reports from countries, the *Interim Assessment of Biodiversity Enabling Activities*, and verbal interviews and e-mail interaction with country project coordinators.[34]

The Analysis listed a number of recent gains, achievements, and milestones in biodiversity enabling activities at the national level. Firstly, Biodiversity Country Studies (BCSs), which were designed to 'gather and analyze the data required to drive forward the process of developing national strategies, plans, or programs for the conservation and sustainable use of biological diversity and to integrate these activities with other relevant sectoral or cross-sectoral plans, programs, or policies,'[35] have indeed provided some valuable information. In the twenty-six countries in which BCSs have been completed, comprehensive databases and bibliographies on biodiversity conservation, species, and ecosystems have been created.[36]

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[29] CITES, The Elephant Trade Information System (ETIS), <http://www.cites.org/eng/prog/ETIS/index.shtml> (visited 4 November 2006).

[30] Convention on Access to Information, Public Participation and Access to Justice in Environmental Matters, Aarhus, 25 June 1998, in force 30 October 2001, 38 International Legal Materials (1999) 517. Article 10(5) provides that:
'Any non-governmental organization, qualified in the fields to which this Convention relates, which has informed the Executive Secretary of the Economic Commission for Europe of its wish to be represented at a meeting of the Parties shall be entitled to participate as an observer unless at least one third of the Parties present in the meeting raise objections.'

[31] UN Economic Commission for Europe, Report of the First Meeting of the Parties, UN Doc. ECE/MP.PP/2/Add.8 (2004), Annex 4.

[32] *Ibid.*, Annex paras 18-24.

[33] Esther Mwangi, *Analysis on Biodiversity Enabling Activities* [hereinafter referred as *Analysis*], March 2006, unofficial document.

[34] *Ibid.* at 4.

[35] United Nations Environment Programme, Responding to Africa's Environmental Priorities, available at <http://dgef.unep.org/publications/brochures/rad0FDD2.pdf> (visited 4 November 2006), at 14.

[36] *Analysis*, *supra* note 33, at 6.

The creation of 131 NBSAPs was also noted as a milestone.[37] Furthermore, the development of BCSs and NBSAPs had additional value, beyond the final products

that were created. The process of completing NBSAPs and BCSs helped to create and build capacity in institutions and of personnel within countries relating to biodiversity; and also began the entrenchment of consultative processes with regard to national decision-making on biodiversity issues.[38]

Additionally, the Biodiversity Planning Support Programme (BPSP) helped to lay the foundation for integrating biodiversity planning in other sectors, such as agriculture, fisheries, forestry, tourism, environmental impact assessment procedures; and improvement of economic tools and improvement of financial planning for biodiversity conservation. The BPSP resulted in the development of thematic papers on each of the above sectors; which countries can use as a tool to help them integrate biodiversity planning into these sectors.[39]

However, the Analysis also noted a number of gaps, omissions, and shortcomings in current biodiversity enabling activities. For example, it noted that although 131 countries have prepared NBSAPs, the completed NBSAPs have several shortcomings. Key shortcomings include:

(1) That NBSAPs are not properly mainstreamed into decision-making arms of the government, thus creating problems for securing internal funding for biodiversity conservation activities and hampering the implementation of specific articles of the CBD. For instance, Article 6(b), which obliges parties to '[i]ntegrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes and policies.'[40]
(2) There is a lack of complementary agreements with sectors influencing biodiversity conservation; such as economic planning, finance, public works, and tourism.[41]
(3) Many NSBAPs were created six to eight years ago, and are already in need of updating.[42]
(4) The Action Plans in NBSAPs were a problem in themselves, in that they are merely a shopping lists of un-prioritized projects for external donors; rather than being plans on 'fundamental issues such as policies and sub policies, legislative measures, and related issues that are able to move the biodiversity agenda 'en masse'.[43]

[37] *Ibid.* at 7.
[38] *Ibid.* at 7.
[39] *Ibid.* at 8.
[40] *Ibid.* at 10.
[41] *Ibid.* at 12-13.
[42] *Ibid.* at 14-15.
[43] *Ibid.* at 11-12.

(5) The Action Plans in NBSAPs have generally failed to address country-based resource mobilization; meaning that countries are not taking advantage of internal financing mechanisms through economic measures such as user fees and tax incentives.[44]
(6) There is no proper mechanism for determining whether or not, and to what degree, Action Plans are being translated into actual implementation efforts.[45]
(7) Lack of communication programs to support enabling activities was also noted; meaning that enabling activities are not reported through the media to the general public, policy makers, or external donors.[46]
(8) Public support for enabling activities was equally lacking; touching both on lack of general communication and on lack of meaningful participation by relevant stakeholders, such as non-governmental institutions (NGOs), in enabling activities.[47]
(9) COP documentation is too voluminous and too complicated for countries easily to understand and digest; making implementation and enabling activities difficult for many Parties.[48]

3.3 Review of existing national implementing legislation

A final way to illustrate the current extent and status of national policy frameworks for implementation of the CBD is to examine the biodiversity-related legislation developed and adopted by the Parties to the CBD. Currently, it seems that only nine Parties have adopted integrated, comprehensive, and overarching biodiversity legislation. These Parties are Australia, Bulgaria, Bangladesh,[49] Costa Rica, India, Peru, Philippines, South Africa, and Venezuela. Each biodiversity law is different and each has its strengths and weaknesses.[50] In addition, the Eastern Caribbean states have developed regional frame harmonized national biodiversity legislation for the implementation of a cluster of global and regional biodiversity-related environmental conventions.[51] This regional instrument will serve as a tool to guide the countries in the region to use and, as appropriate, to develop their specific comprehensive national biodiversity legislation that will, inter alia, implement biodiversity-related environmental conventions to which a country is a party.

[44] *Ibid.* at 12.
[45] *Ibid.* at 15.
[46] *Ibid.* at 13.
[47] *Ibid.* at 14.
[48] *Ibid.* at 15-16.
[49] At the time of reviewing the Bangladesh legislation it was still a draft and the author was not able to confirm if it has been adopted yet.
[50] Due to language constraints, this article will not address the Acts from Costa Rica, Peru, and Venezuela.
[51] See <http://www.unep.org/dec and http://www.oecs.org> (visited 16 May 2007).

3.3.1 Australia – Environment Protection and Biodiversity Conservation Act (1999)

Australia's Environment Protection and Biodiversity Conservation Act[52] implements many key CBD provisions and includes great detail in its implementation instructions; focusing mainly on the CBD's first objective, i.e., the conservation of biological diversity. For example, the Act provides instructions for the creation, contents, and implementation of several different types of plans, including recovery plans and threat abatement plans for listed threatened species and ecological communities,[53] wildlife conservation plans,[54] management plans for listed World Heritage properties,[55] management plans for listed National Heritage places,[56] plans for listed wetlands of international importance,[57] and management plans for Commonwealth Heritage places.[58]

The Act also establishes procedures for designating many different types of protected areas and providing for their management. Such areas include: World Heritage properties, National Heritage places, wetlands of international importance, biosphere reserves, Commonwealth Heritage places, Commonwealth reserves, and conservation zones.[59] Additionally, the Act establishes procedures for listing threatened species and ecological communities and providing for their protection.[60] Furthermore, the Act sets out procedures for conducting environmental assessments for activities likely to have a significant impact on any protected area or listed species or ecological community.[61]

The Act establishes a number of Committees to assist the Minister of Environment with the implementation of the Act; including the Threatened Species Scientific Community,[62] the Biological Diversity Committee,[63] and the Indigenous Advisory Committee.[64] A final point to note is that the Act authorizes the Minister of Environment to 'give financial assistance to the governments of foreign countries and organizations in foreign countries to help the recovery and conservation, in those countries, of species covered by international agreements to which Australia is a party.'[65]

[52] See <http://www.forest-trends.org/biodiversityoffsetprogram/BBop%20library%202/Australia/Not%20Printed/EnvProtBioDivCons%201999%20-%20Vol%201.pdf> (visited 4 November 2006).
[53] Australia Environment Protection and Biodiversity Conservation Act (Australia EPBCA), 1999, at Ch. 5, Pt. 13, Div. 5, Subdiv. A, §§ 267-284.
[54] *Ibid.* at Ch. 5, Pt. 13, Div. 5, Subdiv. B, §§ 285-298.
[55] *Ibid.* at Ch. 5, Pt. 15, Div. 1, §§ 313-324.
[56] *Ibid.* at Ch. 5, Pt. 15, Div. 1A, §§ 324A-324ZC.
[57] *Ibid.* at Ch. 5, Pt. 15, Div. 2, §§ 325-336.
[58] *Ibid.* at Ch. 5, Pt. 15, Div. 3A, §§ 341A-341ZH.
[59] See *ibid.* at Ch. 5, Pt. 15—Protected Areas.
[60] See *ibid.* at Ch. 5, Pt. 13—Species and Communities.
[61] See *ibid.* at Ch. 4—Environmental assessments and approvals.
[62] *Ibid.* at Ch. 6, Pt. 19, Div. 1, §§ 502, 503.
[63] *Ibid.* at Ch. 6, Pt. 19, Div. 2, §§504,505.
[64] *Ibid.* at Ch. 6, Pt. 19, Div. 2A, §§ 505A, 505B.
[65] *Ibid.* at Ch. 5, Pt. 13, Div. 7, §302.

In addition to implementing the CBD, the Act also implements provisions of four other biodiversity-related MEAs; namely, the Convention on Migratory Species (CMS),[66] the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES),[67] the Convention on Wetlands of International Importance (Ramsar Convention),[68] and the World Heritage Convention (WHC).[69]

3.3.2 Bangladesh – Biodiversity and Community Knowledge Protection Act (proposed in 1998)

In contrast to Australia's Act, Bangladesh's proposed Biodiversity and Community Knowledge Protection Act focuses mainly on the CBD's third objective: establishing fair and equitable sharing of the benefits arising out of the utilization of genetic resources. For instance, the first general objective of the Act is:

> 'to protect the sovereign rights of the Communities that have knowledge of biodiversity, and have managed, maintained, conserved, reproduced and enhanced biodiversity, genetic resources and traditional knowledge, culture and various forms of practice related to these resources and which are always held in common.'[70]

The Act establishes that all biological and genetic resources within Bangladesh 'belong in perpetuity to the people of Bangladesh … [and] constitute the Common Property Regimes of the country and cannot, therefore, be alienated irrevocably nor can its enjoyment be impaired.'[71] It also provides that biological and genetic resources cannot be 'sold, assigned, transferred or dealt in any manner without explicit Prior Informed Consent.'[72]

The Act establishes the National Biodiversity Authority (Authority), to be composed of 'representatives from the public sector, scientific and professional organizations, people's organizations, women's organizations, development and environmental organizations, and representatives of local and indigenous communities,' to implement

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[66] *Ibid.* at Ch. 5, P. 13, Div. 2 – Migratory species. Convention on the Conservation of Migratory Species of Wild Animals, Bonn, 23 June 1979, in force 1 November 1983, 19 *International Legal Materials* (1980) 15, <http://www.cms.int>.

[67] *Ibid.* at Ch. 5, Pt. 13A – International movement of wildlife specimens.

[68] *Ibid.* at Ch. 2, Pt. 3, Div. 1, Subdiv. B – Wetlands of international importance; Ch. 5, Pt. 15, Div. 2 – Managing wetlands of international importance. Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 February 1971, in force 21 December 1975, 11 *International Legal Materials* (1972), 963, <http://www.ramsar.org>.

[69] *Ibid.* at Ch. 2, Pt. 3, Div. 1, Subdiv. A – World Heritage; Ch. 5, Pt. 15, Div. 1 – Managing World Heritage properties. Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, 16 November 1972, in force 17 December 1975, 11 *International Legal Materials* (1972) 1358, <http://whc.unesco.org>.

[70] Biodiversity and Community Knowledge Protection Act of Bangladesh [Bangladesh BCKPA], proposed in 1998, at Art. 2.1(a), <http://www.grain.org/docs/bangladesh-comrights-1998-en.pdf> (visited 4 November 2006).

[71] *Ibid.* at Art. 6.1.

[72] *Ibid.* at Art 7.4.

and enforce the Act.[73] Among its duties, the Authority is charged with verifying that prior informed consent is practiced, establishing lists of endangered ecosystems and threatened biodiversity, establishing mechanisms to identify threats to biological and genetic diversity, and developing and monitoring plans, strategies, and policies to conserve biodiversity and ensure the sustainable use of its components.[74]

The Act also establishes the National Biodiversity Information System,[75] which, among other duties, administers the National Biological Inventory, a 'complete inventory of all the biological wealth of the nation'.[76]

The Act does not implement any other biodiversity-related MEAs.

3.3.3 Bulgaria – Biological Diversity Act (2002)

Like Australia's Act, Bulgaria's Biological Diversity Act focuses on the CBD's first objective, the conservation of biological diversity. The Act establishes a National Ecological Network, consisting of special areas of conservation, protected areas outside special areas of conservation, and buffer zones around protected areas.[77] It also provides guidance on the management plans that are required for special areas of conservation.[78] The Act also provides for the conservation of individual species[79] and sets forth instructions for completing action plans; which are required for species endangered on an international scale, species with an unfavorable conservation status within Bulgaria, and non-native species within Bulgaria that have an adverse impact on native species.[80] In addition to these individual management and action plans, the Act requires the Minister of Environment and Water to develop a National Strategy for conservation of Biological Diversity and a National Plan for Conservation of Biological Diversity.[81]

The Act establishes the National Council of Biological Diversity, to serve as an advisory body to the Minister of Environment and Water,[82] which consists of 'representatives of the ministries and central-government departments, research and academic institutes, non-governmental and conservationist organizations concerned'.[83] Notably, the Act instructs the Ministry of Agriculture and Forestry, the Ministry of Regional Development and Public Works, other state bodies, and municipalities to 'integrate the conservation of biological diversity and sustainable management of

[73] *Ibid.* at Art. 11.1.
[74] *Ibid.* at Art. 10.13.
[75] *Ibid.* at Art. 12.
[76] *Ibid.* at Art. 12.1(c).
[77] Bulgaria Biological Diversity Act [Bulgaria BDA], 2002, at Ch. 2, §I, Art. 3(1), <http://www.internationalwildlifelaw.org/BiodiversityActBulgaria.pdf> (visited 4 November 2006).
[78] *Ibid.* at Ch. 2, §V, Arts. 27-34.
[79] *Ibid.* at Ch. 3.
[80] *Ibid.* at Ch. 3, §II, Arts. 37-40.
[81] *Ibid.* at Ch. 6, Art 115(2),(3).
[82] *Ibid.* at Ch. 6, Art. 116(1).
[83] *Ibid.* at Ch. 6, Art. 116(2).

biological resources into all plans, projects, programmes, policies and strategies in the respective sector…'.[84] Furthermore, the Act provides detailed provisions outlining administrative penalties for violations of the Act.[85]

In addition to the CBD, the Act also implements provisions of CITES.[86] Further, it notes that Ramsar Conservation Sites should be incorporated into the National Ecological Network;[87] and states that one purpose of the National Ecological Network is the 'provision of sufficiently spacious and high-quality sites for wild animals to breed, feed and rest, including during the period of migration, moulting and wintering'.[88]

3.3.4 India – National Biodiversity Act (2002)

Like the Bangladeshi Act, India's National Biodiversity Act[89] provides the most detail with regard to the third objective of the CBD: establishing fair and equitable sharing of the benefits arising out of the utilization of genetic resources. However, although it does not go into great detail, it does implement many CBD provisions related to the first CBD objective, with binding language, in Ch. IX, §36(1):

> 'The Central Government **shall** develop national strategies, plans, programmes for the conservation and sustainable use of biological diversity including measures for identification and monitoring areas rich in biological resources, promotion of *in situ* conservation and *ex situ* conservation of biological resources, incentives for research, training, public education to increase awareness with respect to biodiversity.'[90] (Emphasis added)

Furthermore, the Act establishes a three-tiered structure of national, state, and local-level institutions to take on different tasks related to the three objectives of the CBD. The National Biodiversity Authority administers the procedures for granting or denying permission to non-Indians to conduct biological resources -related activities in India[91] and issues 'guidelines for access to and equitable benefit sharing'.[92] The National Biodiversity Authority may also advise the Central Government on matters related to the CBD's three objectives;[93] and advise State Governments in the selection of areas to be protected as heritage sites.[94]

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84 *Ibid.* at Ch. 6, Art. 118.
85 *Ibid.* at Ch. 7.
86 *Ibid.* at Ch. 4.
87 *Ibid.* at Ch. 2, §1, Art. 3(2).
88 *Ibid.* at Ch. 2, § I, Art. 4(2).
89 India National Biodiversity Act [India NBA], 2002. <http://www.nbaindia.org/act/act_ch9.htm> (visited 4 November 2006).
90 *Ibid.* at ch. IX, §36(1).
91 *Ibid.* at ch. IV, §18(1)&(2).
92 *Ibid.* at ch. IV, §18(1).
93 *Ibid.* at ch. IV, §18(3)(a).
94 *Ibid.* at ch. IV, §18(3)(b).

Additionally, the State Biodiversity Boards advise the State Governments on matters related to the CBD's three objectives;[95] and administer the procedures for granting or denying permission to Indians to conduct biological resources -related activities.[96]

Finally, local Biodiversity Management Committees promote the 'conservation, sustainable use and documentation of biological diversity including preservation of habitats, conservation of land races, folk varieties and cultivars, domesticated stocks and breeds of animals and microorganisms and chronicling of knowledge relating to biological diversity.'[97] Biodiversity Management Committees can also collect fees from any person 'accessing or collecting any biological resource from areas falling within its territorial jurisdiction.'[98]

However, like the Bangladeshi proposed legislation, the Act does not implement provisions of any other biodiversity-related MEAs.

3.3.5 The Philippines – an Act Providing for the Conservation and Protection of Wildlife Resources and their Habitats, Appropriating Funds Therefor and for Other Purposes (short title: Wildlife Resources Conservation and Protection Act) (2001)

The Philippine Act[99] focuses primarily on the first and third CBD objectives: namely, conservation of biological diversity and establishing fair and equitable sharing of the benefits arising out of the utilization of genetic resources. It provides for the protection of threatened species through listing of threatened species and designation of critical habitats.[100] The Act establishes several institutions to aid in its implementation; including the Wildlife Management Fund,[101] National Wildlife Research Centers,[102] the Wildlife Rescue Center,[103] and Wildlife Traffic Monitoring Units.[104] Additionally, it provides for the deputation of Wildlife Enforcement Officers.[105]

Notably, the Philippine Act contains a provision on appropriations, which states:

> '[t]he amount necessary to implement the provisions of this Act shall be charged against the appropriations of the Department of Environment and Natural Resources in the current General Appropriations Act. Therefore, such sums as may

[95] *Ibid.* at ch. VI, §23(a).
[96] *Ibid.* at ch. VI, §23(b).
[97] *Ibid.* at ch. X, §41(1).
[98] *Ibid.* at ch. X, §41(3).
[99] Philippines Act Providing for the Conservation and Protection of Wildlife Resources and their Habitats, Appropriating Funds Therefor and for Other Purposes (short title: Wildlife Resources Conservation and Protection Act) [Philippines WRCPA], 2001.
[100] *Ibid.*at Ch. III, Art. 2, §§ 22-25.
[101] *Ibid.* at Ch. VI, §29.
[102] *Ibid.* at Ch. VI, §31.
[103] *Ibid.* at Ch. VI, §32.
[104] *Ibid.* at Ch. VI, §33.
[105] *Ibid.* at Ch. VI, §30.

be necessary to fully implement the provisions of this Act shall be included in the annual General Appropriations Act.'[106]

Additionally, like the Bulgarian Act, the Philippine Act includes detailed provisions on illegal Acts;[107] and fines and penalties associated with illegal Acts.[108]

With regard to the implementation of the other biodiversity-related MEAs, the Act implements CITES; but only briefly, as it mentions restrictions on importation and exportation of wildlife without addressing these restrictions in detail.[109] It also designates specific management and scientific authorities for the implementation of CITES.[110]

3.3.6 South Africa – National Environmental Management: Biodiversity Act, 2004

South Africa's Act[111] also focuses primarily on the first and third CBD objectives: conservation of biological diversity and establishing fair and equitable sharing of the benefits arising out of the utilization of genetic resources. The South African Act includes very detailed provisions on planning.[112] The Act requires the Minster responsible for national environmental management to 'prepare and adopt a national biodiversity framework within three years [of the date] on which [the] Act takes effect,'[113] and sets forth requirements for the contents of the framework.[114] The Act also provides for the establishment of bioregions and the creation of bio-regional plans, their contents, and their review.[115] Finally, the Act authorizes 'any person, organization or organ of the state desiring to contribute to biodiversity management' to submit a biodiversity management plan for an ecosystem or indigenous species to the Minister responsible for environmental management.[116] The Act also sets forth requirements for the contents and review of biodiversity management plans.[117]

Additionally, the Act establishes the South African National Biodiversity Institute [the Institute], and provides it with a detailed mandate.[118] Duties of the Institute include, inter alia, monitoring and reporting on the status of South Africa's biodiversity, the conservation status of listed threatened or protected species and listed ecosystems, and the status of all listed invasive species;[119] managing, controlling, and

[106] *Ibid.* at Ch. VI, §38.
[107] *Ibid.* at Ch. IV.
[108] *Ibid.* at Ch. V.
[109] *Ibid.* at Ch. III, §11.
[110] *Ibid.* at Ch. II, §19.
[111] South African National Environmental Management: Biodiversity Act [S.A. Act], 2004, <http://www.info.gov.za/gazette/acts/2004/a10-04.pdf> (visited 4 November 2006).
[112] *Ibid.* at ch. 3, pt. 1.
[113] *Ibid.* at ch. 3, pt. 1, §38.
[114] *Ibid.* at ch. 3, pt. 1, §39.
[115] *Ibid.* at ch. 3, pt. 1, §§40-42.
[116] *Ibid.* at ch. 3, pt. 1, §43.
[117] *Ibid.* at ch. 3, pt. 1, §§45-46.
[118] *See ibid.* at ch. 2, pt. 1.
[119] *Ibid.* at ch. 2, pt. 1, §11(1)(a).

maintaining national botanical gardens;[120] and collecting, generating, processing, coordinating, and disseminating information about biodiversity and the sustainable use of its components.[121] Furthermore, the Institute is authorized to coordinate programmes to involve civil society in the conservation and sustainable use of biodiversity and the rehabilitation of ecosystems;[122] and to undertake and promote research on biodiversity and its sustainable use.[123]

The Act also contains provisions on trade in listed threatened or protected species, which by implication refers to CITES implementation.[124]

3.3.7 Gaps

These Acts, while making positive strides to implement the CBD at the national level, are not without problems. For example, as noted above, although the CBD has three main objectives, individual countries have their own priorities and these priorities are reflected in the fact that many of these Acts focus mainly on only one or two of the CBD's objectives, whilst either disregarding or only briefly mentioning the others.

For example, while the Australian and Bulgarian Acts go into great detail implementing the CBD's first objective (the conservation of biological diversity), by establishing protected areas; setting forth procedures for listing and protecting threatened species and ecosystems; and establishing requirements and guidelines for plans, programmes and strategies, they do not include similarly detailed provisions on the CBD's third objective (fair and equitable sharing of benefits arising out of the utilization of genetic resources). Conversely, the Bangladeshi draft Act and India's Act focus almost exclusively on the CBD's third objective, touching very briefly only on the CBD's first objective. Likewise, none of the Acts seem to devote much attention to the CBD's second objective: the sustainable use of the components of biological diversity. This may be because of the specific focuses or priorities countries have on biodiversity issues.

Similarly, there are some key provisions of the CBD that have been left out of many, or in some cases all, of the Acts. For example, the integration of biodiversity into relevant sectoral and cross-sectoral plans, programmes, and policies is required by CBD Article 6(b); and envisioned by CBD Strategic Plan Goal 3.3. However, this provision is not addressed in the Australian, Bangladeshi, or Philippine Acts. The South African Act does mention that the national biodiversity framework must 'provide for an integrated, co-ordinated and uniform approach to biodiversity management by organs of state in all spheres of government'.[125] However, it does not specifically

[120] *Ibid.* at ch. 2, pt. 1, §11(1)(e).
[121] *Ibid.* at ch. 2, pt. 1, §11(1)(j).
[122] *Ibid.* at ch. 2, pt. 1, §11(1)(n).
[123] *Ibid.* at ch. 2, pt. 1, §11(1)(*l*).
[124] *Ibid*. at ch. 3. pt. 3.
[125] South African Act, *supra* note 111, at ch. 3, pt. 1, §39(1)(a).

address the integration of biodiversity concerns into relevant sectoral or cross-sectoral plans, programmes, and policies. The Indian Act goes a bit farther, stating that

'the Central Government shall, as far as practicable wherever it deems appropriate, integrate the conservation and sustainable use of biological diversity into relevant sectoral or cross-sectoral plans, programmes, and policies.'[126] Conversely, it does not elaborate on how this will be done; nor does it identify what sectoral or cross-sectoral plans, programmes, and policies are considered 'relevant' for biodiversity concerns. Equally, the addition of the phrase 'as far as practicable whenever it deems appropriate' effectively changes the CBD's mandatory requirement into a discretionary one.

Only the Bulgarian Act fully addresses this provision; as it instructs the Ministry of Agriculture and Forestry, the Ministry of Regional Development and Public Works, other state bodies, and municipalities to 'integrate the conservation of biological diversity and sustainable management of biological resources into all plans, projects, programmes, policies and strategies in the respective sector…'.[127] Finally, none of the Acts addresses the further provision of the integration of the 'consideration of conservation and sustainable use of biological resources into national decision-making,' as required by CBD Article 10(a).

By the same token, the Acts seem largely to ignore certain specific provisions on international cooperation. For example, they do not include provisions for providing for or facilitating 'access for and transfer to other Contracting Parties of technologies that are relevant to the conservation and sustainable use of biological diversity' or promoting 'international technical and scientific cooperation in the field of conservation and sustainable use of biodiversity,' as required by the CBD (Articles 16(1) and 18(1), respectively).

Conducting environmental impact assessments (EIAs) for activities that may have a significant adverse impact on biodiversity is an important part of conserving biodiversity and its components. Article 14 requires parties to the CBD to introduce appropriate EIA procedures in their biodiversity activities. Nonetheless, while the Australian Act includes detailed provisions on EIAs,[128] the Bulgarian[129] and Indian [130] Acts only briefly mention EIAs. EIA procedures are not elaborated on at all in the Bangladesh, Philippine,[131] or South African[132]Acts.

[126] Indian NBA, *supra* note 89, at Ch. IX, §36(3).
[127] *Ibid.* at Ch. 6, Art. 118.
[128] Australian EPBCA *supra* note 53, at Ch. 4.
[129] Bulgarian BDA, *supra* note 77, at Ch. 2, §V, Art. 31.
[130] Indian NBA, *supra* note 89, at Ch. IX, §36(4)(i).
[131] The Philippines Act does state that introduction of exotic wildlife is subject to an environmental impact study, but it does not set forth procedures for conducting such a study, nor does it mention environmental impact studies for more general categories of activities.
[132] The South African Act does state that activities 'of a nature that may negatively impact on the survival of a listed threatened or protected species' may be prohibited, but it does not set forth procedures for conducting an EIA.

Finally, it is difficult to implement the CBD at the national level unless adequate financial resources are directed towards the institutions charged with implementing

and enforcing the Convention. Although many of the acts identify potential sources for funding, few mandate the provision of funds from the central government. For example, although the Indian Act creates funding mechanisms (i.e. the National Biodiversity Fund[133] and State Biodiversity Funds[134]), Central and State Government funding of those mechanisms is discretionary, not mandatory.[135] Similarly, although the South African Act identifies sources of funding for the National Biodiversity Institute, including funds appropriated by Parliament, it does not *require* Parliament to contribute funds to the Institute.[136]

Additionally, the Bangladeshi Act establishes that implementation of the Act should be financed by the establishment of a national trust fund; but the allocation of any state revenue budget into the fund is discretionary.[137] Furthermore, while the Bulgarian Act requires the Minister of Environment and Water to finance the activities to implement the Act, it does not specify where such funds should come from.[138] Finally, the Philippine Act establishes a Wildlife Management Fund; and, although it establishes that the Fund should 'derive from fines imposed and damages awarded, fees, charges, donations, endowments, administrative fees or grants in the form of contributions,' it does not contain any provisions requiring or authorizing the contribution of funds from the central government.[139]

4. The way forward

4.1 The main obstacles and challenges

Establishing a national policy framework for implementation of the CBD is not an easy task; but, although each Party's situation will be different, there are some common obstacles to and challenges for national implementation of the CBD.

In the Appendix to the 2002 Strategic Plan for the Convention on Biodiversity,[140] the COP listed the following obstacles:

> (1) Political and societal obstacles, including: lack of political will and support for implementation of the CBD; limited public participation and stakeholder

[133] *Ibid.* at ch. VII.
[134] Indian NBA, *supra* note 89, at ch. VIII.
[135] *Ibid.* at ch. VII, §26; ch. VIII, §31.
[136] South African Act, *supra* note 111 , at ch. 2, pt. 5, §31.
[137] Bangladeshi BCKPA, *supra* note 70, at Art. 17.
[138] Bulgarian BDA, *supra* note 77, at Ch. 6, Art. 115(8).
[139] Philippine WRCPA, *supra* note 99, at Ch. VI, §29.
[140] *Strategic Plan*, *supra* note 15 at Appendix.

> involvement; and lack of mainstreaming and integration of biodiversity issues into other sectors. (2) Institutional, technical, and capacity-related obstacles, including: institutional weaknesses that limit capacity to Act; lack of human resources, transfer of technology, expertise, and adequate scientific research capacities; and loss of traditional knowledge. (3) Lack of accessible knowledge and information, including: inadequate understanding and documentation of loss of biodiversity and corresponding goods and services; inefficient dissemination of information; and lack of public education and awareness. (4) Economic policy and financial resources obstacles, including: lack of financial and human resources, economic incentive measures, and benefit-sharing; and fragmentation of GEF financing. (5) Collaboration/cooperation obstacles, including: lack of synergies at the national and international levels, horizontal cooperation among stakeholders, effective partnerships, or engagement of the scientific community. (6) Legal/juridical impediments, including lack of appropriate Acts and polices. (7) Socio-economic factors, including: poverty, population pressures, and unsustainable patterns of production and consumption. (8) Natural phenomena and environmental changes, including climate change and natural disasters.

These obstacles are often exacerbated in countries that have an actual or perceived greater need for legislation and policies regarding issues such as economic development and poverty reduction. These Parties prioritize scarce resources accordingly, leaving few human, financial, and technical resources to be utilized for implementation of the CBD.

4.2 Possible future action for consideration

The United Nations Environment Programme (UNEP), the CBD Secretariat, and the Parties themselves have already taken steps to improve national implementation; of only of the CBD but also of other biodiversity-related agreements. UNEP does so through the implementation of common issues (such as invasive alien species or climate change or protected areas), under a cluster of related environmental agreements (such as a cluster of biodiversity agreements). For example, UNEP has worked with the Organization of Eastern Caribbean States to support the development and drafting of *Frame Harmonized Biodiversity Legislation* to implement not only the CBD, but all key biodiversity-related multilateral environmental agreements; namely, five global agreements – the CBD, the CMS, CITES, the Ramsar Convention, and the WHC and one regional agreement, the SPAW Protocol (Protocol concerning Specially Protected Areas and Wildlife under the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena Convention.

Additionally, in order to address the problem that COP documentation is too voluminous and complicated for Parties easily to understand and implement (a shortcoming that was also identified by the GEF's Analysis on Biodiversity Enabling

Activities), UNEP, in collaboration with partners such as the World Conservation Union (IUCN), the World Conservation Monitoring Centre (UNEP-WCMC), and the Secretariats of the CBD, CMS, CITES, Ramsar Convention, WHC, the United Nations Convention to Combat Desertification (UNCCD), the United Nations Framework Convention on Climate Change (UNFCCC), and selected Parties, have developed an Internet-based management system focusing on common issues cutting across a number of related environmental agreements entitled 'Issue Based Modules for Coherent Implementation of Biodiversity Conventions' (Issue Based Modules). The Issue Based Modules web portal provides structured information on four cross-cutting issues (these being climate change, inland waters, invasive alien species, and sustainable use) by identifying and grouping the implementation requirements imposed by each MEA's articles, COP decisions, recommendations, and resolutions.[141]

Furthermore, as part of a series of regional and national workshops for specific and selected stakeholders on implementation of MEAs, UNEP has built and enhanced the capacity of Parliamentarians in Lesotho and Gabon better to implement the biodiversity-related cluster of MEAs. UNEP has also supported the development of environmental indicators for implementation of the biodiversity-related MEAs. Furthermore, UNEP has developed a capacity-building initiative for the development of national legislation for the implementation of the 'Rio Conventions' (CBD, UNFCCC, and UNCCD), taking into account poverty alleviation strategies, in four countries: Mozambique, Rwanda, Tanzania, and Uganda.

There are many other possibilities for future action. Some involve the expansion and extension of current efforts. These include, for example, assisting in the development and drafting of frame harmonized biodiversity legislation for additional regions and countries, extending and expanding the Issue Based Modules project to included information on additional issues that cut across the biodiversity-related MEAs (such as forests, access and benefit sharing, coastal and marine biodiversity, protected areas, fisheries, agro-biodiversity, dryland biodiversity, incentive measures/trade issues, and environmental impact assessment), and conducting additional workshops and trainings for Parliamentarians, Attorneys General and other stakeholders involved in the development, adoption, implementation, and enforcement of national legislation and policies.

Other possibilities for future action include new projects, such as identifying a Party in each region that has progressed the furthest in terms of establishing a national policy framework for implementation of the CBD; and then developing a compilation of lessons learned and best practices based on that Party's experiences. Other

[141] United Nations Environment Programme, Issue Based Modules for Coherent Implementation of Biodiversity Conventions, available at <http://svs-unepibmdb.net/ ?PHPSESSID=cdd1306ea5286dd5c7fef8539e3f93c9> (visited 4 November 2006).

Parties in the region will be able to use the compilation to assist them in developing their own national policy frameworks.

Additionally, based on the obstacles listed in the CBD's Strategic Plan and the shortcomings noted in the GEF's Analysis, it is clear that mainstreaming implementation of the CBD into wider strategies, plans, programmes, and policies for poverty reduction, economic development, and achievement of the Millennium Development Goals (MDGs) is imperative. Doing so can help to highlight the synergies between implementation of the CBD and progress in development, therefore helping to increase political and public will and support for the implementation of the CBD, and facilitating the commitment of resources to projects and activities that will result in both effective implementation of the CBD and in progress towards achieving development goals. Most importantly, in order to ensure that capacity-building efforts and other possibilities for future action are truly effective, it is necessary to consult with the Parties themselves to determine their own needs and priorities; based on the challenges and obstacles that are most persistent in their countries.

5. Conclusion

In order for the CBD to be truly effective and to achieve its three objectives, 'the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources';[142] Parties must take action to implement the CBD within their borders, including establishing national policy frameworks for implementation of the CBD. Without broad, comprehensive frameworks, national implementation will be piecemeal at best and cannot possibly be full and complete. Parties have achieved various stages of success in developing their national policy frameworks, but challenges remain. Future activities need to systematically address these challenges in order to accomplish full national implementation and consequently realize the objectives of the CBD.

[142] Art. 1.

PART III

SPECIAL THEME: SPECIFIC BIODIVERSITY-RELATED ISSUES AND PROBLEMS

The Protection of Biodiversity-Related Traditional Knowledge

Loretta Feris[1]

1. Introduction

It is now a common phenomenon that individuals and corporate entities gain virtually unencumbered access to knowledge related to the customs and practices derived from bioresources and held by indigenous groups. This knowledge frequently forms the basis for research and development geared toward the patenting of new pharmaceutical and other products. Whilst bioprospecting has developed into a highly profitable enterprise, traditional knowledge holders do not necessarily or often reap the benefits of the utilization of their knowledge in these ventures. The entities who do benefit rarely acknowledge the contributions of original knowledge holders, much less share the benefits derived from it.

Notwithstanding the need for legal protection, current legal tools are not always appropriate mechanisms for the protection of traditional knowledge (hereafter 'TK'). This is in part due to the nature of TK. As a knowledge construct it is fluid and dynamic and authorship is often (albeit not always) collective and oral in nature. TK is, therefore, difficult to delineate as a tangible and defined entity. The dearth of legal protection can also be ascribed to the diminutive value attached to TK. Many legal systems provide less (if any) consideration to ideas that are not contained in a written format.

Arguably, a one- size-fits-all approach to TK is counter-productive. A regime that adopts a variety of mechanisms seems more appropriate. This chapter therefore attempts to assess legal mechanisms that could potentially form part of an overarching legal framework to protect TK. It focuses on both so-called defensive and offensive (positive) mechanisms. Defensive protection of TK consists of 'measures that ensure that other parties do not successfully obtain intellectual property (hereafter

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IP) rights over pre-existing TK', and positive protection of TK is achieved through 'existing legal mechanisms', such as contracts, access restrictions and IP.[2] The chapter also considers the development of a sui generis right to protect TK in light of the limitations of existing mechanisms.

2. The Context of Exploitation

Over the last few decades, biodiversity has become a potential income generator in innovative and pioneering ways. The use of genetic plant and animal sources as the basis for biotechnology is a multi-billion dollar industry. Biodiversity in the age of biotechnology has given rise to a 'Green Rush' in ways that the discovery of gold led to the Gold Rush. Biodiversity is of particular interest to prospectors who search for genetic resources that have commercial value for the research-based pharmaceutical, biotechnological and agricultural industries. It cannot be said, that the profits of this so-called 'Green Rush' have always (or even often) benefited the suppliers of the genetic material, which suppliers are for the most part to be found in the developing world.

Even more hotly contested are the claims of biopiracy. These are claims that indigenous and community knowledge, innovations and practices about the medicinal, cultural, cosmetic, domestic or other value and use of bioresources have been widely appropriated. Not being recognized as either 'scientific' or valuable within traditional Western frameworks of knowledge and ideas, it has been freely utilized by others and patented to the exclusion of its originators and original owners.

Consider the case of the *katempfe* and serendipity berries, which have long been used by African peoples for their sweetening properties. The University of California and Lucky Biotech, a Japanese corporation, were granted a patent for the sweetening proteins naturally derived from these African plants. It is said that thaumatin, the substance that makes *katempfe* sweet, is 2000 times sweeter than sugar, yet calorie-free. The patent is extensive and covers any transgenic plant containing the derived sweetening proteins; however, no attempts have been made to share benefits with local communities.[3]

Similarly, the San people have for multiple decades used the *hoodia*, a succulent plant indigenous to Southern Africa, as a source of water and to suppress their appetite in times of food scarcity. The South African Council for Scientific and Industrial Research (CSIR) conducted research (based on knowledge gathered from members

[2] WIPO, 'Intellectual Property and Genetic Resources, Traditional Knowledge, and Folklore - Traditional Knowledge', <http://www.wipo.int/globalissues/tk/background/index.html> (visited 3 March 2003) [hereafter WIPO TK Web Page]

[3] See N. Roht-Arriaza, 'Of seeds and shamans: The appropriation of the scientific and technical knowledge of indigenous and local communities', 17 *Michigan Journal of International Law* (1996) 919-965 at 923, citing 'Intellectual property rights for whom?', *GRAIN Biobriefing* (June 1994) Part 2 5.

of the Khomani San community) on *hoodia* and managed to isolate the bioactive compound, P57. The CSIR patented its pharmaceutical formulations, aimed at the treatment of obesity around the world,[4] and entered into a licensing agreement for the further development and commercialization of the product with Phytopharm, a British phytomedicine company. In 2002 the CSIR and the San Council reached a 'memorandum of understanding', acknowledging both the rights of the San as "custodians of the ancient body of traditional knowledge" and the CSIR's role in developing the technology involved in extracting the plant's anti-obesity properties.[5] After further negotiations the CSIR agreed to pay the San eight percent of milestone payments made by its licensee, Phytopharm and six percent of all royalties if and when the drug is marketed.[6]

These two stories examples represent the tip of the iceberg. Dozens more patents have been established, outside of developing countries, based on knowledge derived from local communities. In order to understand why incidents like this have become widespread, a full understanding of the nature of TK is required.

As a matter of commonplace, regulating any subject matter requires the identification of a tangible and defined entity. Conceptually, however, it is difficult to delineate TK, as no universal definition exists therefor.[7] According to the World Intellectual Property Organisation (WIPO), the lack of definitional clarity is as a result of three factors: (1) the inability to translate the linguistic context of a word; (2) the lack of appropriate translations for terms; and (3) the presence of non-standard usage of certain terminology.[8] A fourth reason may be the amorphous nature of TK. As a knowledge construct it is fluid, dynamic and authorship is often (albeit not always) collective and oral in nature. One commentator advises that given the difficulty in defining and distinguishing TK from other knowledge, it is best to define it in general terms.[9]

The dearth of legal protection can also be ascribed to the diminutive value attached to TK. Unlike Westerns sources of information, TK is often held and passed along in an oral, rather than written, form. Many legal systems provide less (if any) consideration to ideas that are not contained in a written format. The limitations of Western styled intellectual property systems are instructive in this regard. In Western

4 M. Horak, *The P57 Story: 1963 - 2003* (2004) Bioprospecting Program CSIR Bio/Chemtek.

5 'Extinct San Reaps Rewards' *Mail and Guardian 8 January, 2003,* available at <http://www.mg.co.za> (visited 18 April 2003).

6 'Bushmen to Win Royalties from Slimming Drug', *Mail and Guardian 27 March 2003,* available at <http://www.mg.co.za> (visited 18 April 2003).

7 See WIPO, *Traditional Knowledge – Operational Terms and Definitions*, Doc. WIPO/GRTKF/IC/3/9 (2002), paras 3-4.

8 See WIPO, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders,* WIPO Report on Fact-Finding Missions on Intellectual Property and Traditional Knowledge (1998-1999) 21[hereafter '*WIPO FFM*'].

9 See G. Dutfield, 'TRIPS-related Aspects of Traditional Knowledge', 33 *Case Western Journal of International Law* (2001) 233-240.

society, ideas that are genuinely new, and which have been encapsulated in distinctive form are protected (and rewarded) through intellectual property law. Rights derived from such protection, intellectual property rights (IPRs or IP rights), are deemed to protect against exploitation; whilst at the same time encouraging original, creative and innovative activity.[10] It is, therefore, safe to say that the underlying philosophy of IPRs is to reward creativity. Under patent law, for example, in order to acquire a patent, the invention must not only be non-obvious and useful, but also novel.[11] In other words, the invention should be new and not have been in existence or anticipated in the prior art. TK products and processes, however, often become the subject of patents in Western countries, even though they may not pass the 'novelty' test as a whole. This is mainly as a result of the fact that patent offices in countries such as the US and Japan allow proof of *written* prior art obtained anywhere in the world, but restricts the search of *oral* prior art to its own borders.[12] Yet, it is the *oral* art that provides the basis for most patent applications.

In recent years, the developing world and indigenous communities have stepped forward to claim recognition of their sovereign rights over biological resources and protection of their traditional knowledge, respectively. In this regard, they have increasingly turned to international law and comparative regional and domestic models for possible solutions. Considerable efforts are under way to curb access to bioresources and governments are beginning to act proactively by translating international norms on access to bioresources into domestic regulation.[13] Some challenges in the protection of TK do, however, remain.

3. An Integrated Approach to the Protection of Biodiversity Related Traditional Knowledge

The management and conservation of biological resources are intimately related to the way in which it is utilized; not only by the general public, but specifically by those who hold special knowledge about the medicinal, cultural, agricultural or conservational uses of the properties of plants and animals. Protecting these types of TK has far-reaching benefits for biodiversity conservation over-all. As mentioned above, safeguarding TK can be achieved through both defensive and positive means. However, these concepts are not mutually exclusive. In fact, one could argue that an effective protective scheme should contain elements of both of these concepts.

[10] See J. Watal, *Intellectual Property Rights in the WTO and Developing Countries* (2001) 1.

[11] Art. 27 of WTO Agreement on Trade Related Intellectual Property Rights (TRIPS), available at <http://docsonline.wto.org/>. The Agreement sets down minimum standards for the regulation of intellectual property rights.

[12] Watal, *Intellectual Property Rights in the WTO and Developing Countries*, *supra* note 9, at 90.

[13] The South African National Environmental Management Act: Biodiversity Act 10 of 2004, for example, attempts to regulate access to bioresources and provide for equitable benefit sharing.

3.1 Defensive Protection of TK

Defensive protection of TK involves 'taking measures to ensure unauthorized parties do not unfairly acquire intellectual property (hereafter 'IP') rights over other people's TK'.[14] Three types of defensive protection should be noted: (1) the use of databases to identify the prior art, (2) secrecy and (3) the imposition of a disclosure requirement as a condition for acquiring IP rights.

So-called prior art databases are created to prevent the filing of patents based on the unauthorized use of TK where the prior art is not readily available in discoverable (written) form to patent examiners in granting countries. These databases serve to make TK available, searchable, and exchangeable as prior art.[15] A number of such databases exist in Africa, such as the World Bank's 'Database of Indigenous Knowledge and Practices in Sub-Saharan Africa',[16] the Traditional Medicines Research Group's database in South Africa[17] and the Department of Botany's database at Makerere University in Uganda.[18]

A second solution is to ensure that knowledge regarding the properties and uses of bioresources are simply not disseminated. Appropriation has succeeded in part because of the willingness of communities to volunteer information about their lifelong customs and practices. In some local communities TK may at any rate reside with one practitioner or knowledge-holder, who would pass along the recipes of his or her secrets to the appropriate successor.

A third option is provided by so-called source disclosure and prior informed consent requirements. Patent statutes in several countries have been amended to require patent applicants to provide patent offices with information concerning the origin of the genetic resources in the invention; and also to provide some proof of prior informed consent from government authorities, as well as from TK originators.[19]

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[14] WIPO TK Web Page, *supra* note 1.

[15] The most well-known example is possibly the Honeybee Innovation Database; maintained by the Honeybee Network of the Society for Research into Sustainable Technologies and Development in India.

[16] <http://www.worldbank.org/afr/ik/now.htm> (visited 3 March 2003).

[17] <http://www.mrc.ac.za/Tramed/> (visited 30 April 2003). The group is funded by the South African Medical Research Council and comprises of scientists from the School of Pharmacy at the University of the Western Cape (UWC) and the Medical School at the University of Cape Town (UCT).

[18] WIPO, *Intellectual Property Needs and Expectations of Traditional Knowledge Holders* WIPO Report on Fact-finding Missions on IP and TK (1998-1999) 21.

[19] N. Pires de Carvalho, 'Requiring Disclosure of the Origin of Genetic Resources and Prior Informed Consent in Patent Applications Without Infringing The TRIPS Agreement: The Problem and The Solution', *2 Washington University Journal of Law and Policy* (2000) 371 at 376. See also UNCTAD, *Seminar on the Protection of Traditional knowledge*, available at <http://www.unctad.org/trade_env/test1/meetings/delhi/countriestext/brazil.doc> (visited 10 November 2003). Some of these statutes include the Andean Decision No. 391 of Aug. 16, 1996, establishing a Common Regime on Access to Genetic Resources, Biodiversity Law of Costa Rica, Law No. 7788, enacted on May 27, 1998, the Indian Patents Act, 2d Am. and the South African Patents Amendment Act 20 of 2005.

Thus, in response to patents improperly granted on TK already in the public domain, the patent system provides remedies to TK originators. TK originators can oppose a patent application for an invention comprised of TK and/or petition for cancellation or revocation of an improperly granted patent. This route was successfully used, for example, on behalf of TK holders for Neem Formulations as insecticides and fungicides in the EU.[20]

Disclosure requirements are in line with international obligations flowing from the Convention on Biodiversity (hereafter CBD).[21] Section 15(1) of the CBD, read with Article 3, confirms the sovereign right of states to exploit and grant access to their natural resources; but leaves it to governments to tailor the details through national legislation. It makes it clear that access should only be granted on mutually agreed terms[22] and that it should be subject to the prior informed consent of the state providing access to its resources.[23] With regards to the utilization of indigenous knowledge, Article 8(j) mandates the drafting of national legislation that would 'respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities'; the promote wider application with the approval and involvement of the holders of such knowledge, innovations and practices; and also encourage the 'equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices'. Thus, it is arguable that applications for patents involving genetic resources should not be granted, or should be subject to invalidation or revocation, if they do not provide information regarding the source and evidence of prior informed consent, even if the invention meets all of the substantive elements of patentability.

However, defensive regimes are not without their own particular set of difficulties. Whilst databases, for example, serve to improve the information of the prior art available to patent examiners, such documentation may not be adequate to address the concerns of TK initiators. First, documentation in a database will not necessarily prevent the patenting of commercial products or processes based on TK disclosed in the library.[24] Second, documentation alone will not assure any return for holders of TK. Third, as the information contained in the database is in the public domain, it also prevents the holders of TK to apply for IP protection should they wish to do so.[25]

[20] WTO TRIPS Council, The Protection of Traditional Knowledge and Folklore Summary of Issues Raised and Points Made, Doc. WTO/IP/C/W/370 (2002), at 7 [hereafter 'WTO TK Summary']. The Neem patent was revoked by EU Patent Office but has not been revoked in the US.

[21] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822.

[22] Article 15(4).

[23] Article 15(5).

[24] 'Legislative Options for Protection', *The Hindu* (29 April 2002), available at <http://www.iprlawindia.org> (visited 13 November 2003).

[25] *WIPO FFM*, *supra* note 7, at 89.

Secrecy as a defensive device raises a number of practical considerations. If the knowledge is known amongst several members of a community, it may be hard to enforce a secrecy code. This becomes more of a challenge should the knowledge be shared amongst several communities, which is often the case. In the case of a single knowledge holder the drawback is that the TK practiced by the holder runs the risk of being irretrievably lost, unless that knowledge is documented or disseminated in some form.[26] Source disclosure and prior informed consent requirements also raise a number of problems. First, the definition of the 'prior art' used to assess the novelty requirement of patentability differs amongst different national systems. In some national systems, an examination of the prior art does not consider publicly available or oral traditions outside of their jurisdiction. Yet, it is the oral art that provides the basis for most patent applications. Second, information on the prior art is not always readily available in discoverable form to patent examiners, especially where the invention contains TK originating from another country, exists only in oral form, or is documented in a language unfamiliar to patent examiners locally.[27] However, some systems have addressed these difficulties by defining the prior art as 'earlier disclosures in writing' and that which 'is already publicly known or used anywhere in the world'.[28]

Third, source disclosure and prior consent requirements, whilst arguably in line with obligations stemming from the CBD, is not similarly authorized under the WTO Agreement on Trade Related Intellectual Property Rights (TRIPS). The TRIPS Agreement does not require source disclosure of the invention for patentability and does not provide that the absence of source disclosure can be a basis for invalidation or revocation. It has been argued that requiring source disclosure may in fact amount to a contravention of TRIPS.[29] The same commentator has suggested, however, that the source disclosure obligation may be compatible with TRIPS if, instead of adding it as a condition for granting a patent, source disclosure and proof of prior informed consent is required in order for a patentee to enforce his/her patent rights. Article 8(2) of the TRIPS Agreement permits members to adopt measures to prevent the abuse of IP rights. As an invention knowingly derived directly or indirectly from an illegal act, such as the unauthorized acquisition of genetic resources or associated TK, *may* be deemed abusive, a government may refuse to enforce such patent rights.[30]

The present writer does not share this view. TRIPS establishes a *minimum standard* for protection of intellectual property rights; and member states only have to comply with these minimum legal obligations for the seven forms of intellectual prop-

[26] *Legislative Options*, *supra* note 19.
[27] *Ibid*.
[28] *WTO TK Summary*, *supra* note 19, at para. 14.
[29] Pires de Carvalho, *Re-engineering Patent Law, supra* note 18, at 388 (arguing that patentability based on requirement of indication of origin of genetic resources and evidence of prior informed consent violates Articles 27, 29, 62 and 32 of the TRIPS Agreement).
[30] *Ibid.* at 396. In the US, refusing to enforce patent rights because of IPR abuse is referred to as the 'fraudulent procurement doctrine'.

erty rights in the Agreement. They are therefore free to exact more stringent requirements for intellectual property rights applications. One has to recognize, however, that TRIPS is part of an ongoing effort globally to harmonize intellectual property rights; and stricter requirements would arguably defy this goal. In light of this, the ongoing negotiations to amend the TRIPS agreement to provide for the mandates of the CBD are of the utmost importance.

The relationship between TRIPS and the CBD is being addressed in a multiple of fora: the Conference of the Parties (COP) of the CBD, the WTO, and within the World Intellectual Property Organization. Currently there are three potential scenarios for preventing biopiracy and ensuring benefit-sharing as mandated by the CBD mooted within the TRIPS Council of the WTO:

1) Amending TRIPS to provide for source disclosure and prior informed consent (PIC) as the fourth requirement for registering a patent under TRIPS. Article 27 of TRIPS stipulates three requirements: that the invention must be new; that it must require an inventive step; and that it must be appropriate for industrial application. Source disclosure and PIC will primarily address concerns around biopiracy.
2) Disclosing the source of bioresources and the use of traditional knowledge. The patent applicant would thus need to disclose the country and area of origin of any biological resources and traditional knowledge used, or involved, in the invention; and to provide confirmation of compliance with all access regulation in the country of origin. This would have the additional advantage of protecting traditional knowledge; and governments could control the abuse of traditional knowledge.[31]
3) The disclosure of evidence of benefit-sharing arising out of the utilization of genetic resources and/or traditional knowledge in inventions. The provision of evidence of benefit-sharing must include 'evidence that there was sharing of the benefits arising out of the utilization of the genetic resources and/or traditional knowledge in the invention and that the shares of benefits that accrued to the source and country of origin and/or local/indigenous community, where applicable, was equitable and fair in the circumstances'.[32] The proponents of this scenario acknowledge that it will be difficult to determine whether benefit-sharing was indeed 'fair and equitable'; but suggest that the laws and practices of the countries of origin of the genetic resources and/or associated traditional knowledge should provide the framework within which to determine the terms of fair and equitable benefit-sharing. At the time of applying for a patent, though, the applicant should provide 'evidence of the existence of an arrangement for the fair and equitable sharing of any benefit that may arise out of the utilization of the resources, in ac

[31] Submissions from Switzerland to the TRIPS Council, Docs IP/C/W/400/Rev.1 (2003), IP/C/W/423 (2003) and IP/C/W/433 (2004).

[32] Submission from Bolivia, Brazil, Colombia, Cuba, Dominican Republic, Ecuador, India, Peru and Thailand to the TRIPS Council, Doc. IP/C/W/442 (2005).

cordance with the terms of the country of origin's national laws, regulations and practices.'

Source disclosure is vital to the protection of TK and can be adopted without too much difficulty. South Africa has, in fact, recently adopted a combination of the first two approaches. The Patents Amendment Act[33] requires a statement upon lodging an application for a patent indicating whether or not the invention is based on or derived from an indigenous biological resource, genetic resource or traditional knowledge or use.[34] The applicant must furthermore lodge proof of his or her title or authority to make use of the indigenous biological resource, genetic resource or traditional knowledge or use.[35] The applicant must thus show some form of PIC. An earlier draft version of the Amendment Act also required proof of benefit-sharing, but the wording was dropped. This is regrettable, especially in light of the fact that South Africa's legislation on biodiversity[36] expressly provides for benefit-sharing agreements.[37] Such an Agreement set out in the prescribed format could easily have constituted proof of a benefit-sharing arrangement for the purposes of source disclosure, as required in the Patents Amendment Act. It is, however, commendable that source disclosure is in fact now a requirement in South African patent law.

3.2 Positive Protection of TK

Positive protection of TK may be achieved within the existing legal framework by way of mechanisms such as IP law and contracts regulating access and benefit-sharing. A third possibility is the development of a sui generis right for protection of TK.

3.2.1 Utilizing the Existing IP System

Apart from challenging IP application, TK holders can also protect their knowledge by acquiring and exercising IP rights. The most prominent IP rights are copyright, trade secrets, geographical indications and patents.

Copyright

The scope for using copyright in the area of biodiversity-related TK is limited. In Australia, TK holders have had success in utilizing the Australian Copyright Act[38] to protect their artistic creations from infringement; and in Canada TK holders frequently file designs for copyright protection.[39] In South Africa the amended definition of 'artistic work' which includes 'works of craftsmanship' would provide for

[33] Act 20 of 2005.
[34] Section 3A.
[35] Section 3B.
[36] National Environmental Management Biodiversity Act 10 of 2004.
[37] Section 82; read with section 83.
[38] Copyright Act of 1968.
[39] G. Dutfield, 'TRIPS-Related Aspects of Traditional Knowledge', 33 *Case Western Reserve Journal of International Law* (2001) 233-275 at 249.

protection of TK in this area.[40] Copyright has also been used to protect databases storing TK, although not the content thereof. However, as copyright protects expressions, but not ideas, procedures, methods of operation or mathematical concepts, undocumented knowledge regarding the value and use of bioresources does not fit within this definition.

Protection of Undisclosed Information: Trade Secrets

Legal protection of trade secrets allows individual or legal persons to prevent information lawfully in their control from being disclosed to, acquired by, or used by others without their consent.[41] Whilst TK is often in the public domain, and shared or passed down within a community, knowledge of traditional practices is sometimes protected by secrecy in certain communities. Although trade secret protection is primarily designed to protect anti-competitive practices; it may be constructive in the protection of secretly-held TK, as its requirements are less stringent and more accommodating of TK than other forms of IP.

Trade secret protection requires that the information is not in the public domain, subjected to reasonable steps to keep it undisclosed and has commercial value due to its secrecy.[42] Certain types of TK may qualify for trade secret protection, in particular information not known outside of a particular community or group. The fact that TK may be held by a group of people should not necessarily be a hindrance. In fact, the aim of the protection afforded is to safeguard collective entities such as corporations from untimely and unauthorized disclosure of their business practices and methods. The protection can be afforded to the community as a whole. In this regard it has been noted that 'if a shaman or other individual has exclusive access to information because of his status in the group, that individual or the indigenous group together probably has a trade secret.'[43]

The holders of knowledge may not ordinarily use TK for profit-gain, but it is clearly sought after for its commercial value by those who are trying to gain access to this knowledge. As such, it would meet the 'commercial value' standard. However, protecting TK by means of trade secrets requires positive action by the holder(s) of the information. Thus, unless a local community or indigenous group designates information as a trade secret and takes positive steps to protect it, any unauthorized acquisition or use by a third party would not be protected.[44] Such positive action would include the provision of restricted access to an outside third party only where that party is contracting with the group to access the knowledge for research and commercial purposes.

[40] Section 1(1)(c) Copyright Amendment Act 25 of 1992.
[41] Article 39(2) of TRIPS.
[42] *Ibid*.
[43] J. R. Axt, M. L. Corn, M. Lee and D. M. Ackerman, 'Biotechnology, Indigenous Peoples and Intellectual Property Rights', *Congressional Research Service* (1993) at 63.
[44] *Ibid.* at 66.

Geographical Indications & Appellations of Origin

Geographical indications, which incorporate appellations of origin, are defined in TRIPS as 'indications which identify a good as originating in the territory of a member, or a region or locality in that territory, where a given quality, reputation or other characteristic of the good is essentially attributable to its geographic origin'.[45] Appellations of origin are most often applied in relation to wine and spirits; for example, Champagne from France, Sherry from Spain or Tequila from Mexico, indicating not only source but also traditional methods of preparation and suggestions of established quality.[46] A form of protection often useful for the challenging of trademarks, geographical indications can be utilized to prevent the misleading use of any means in the designation or presentation of a good that indicates or suggests that the good in question originated in a geographical area other than the true place of origin.[47] Attempts to register a trademark may thus be barred on the basis of an existing geographical indication.[48] In addition, this form of IP protection can serve to prevent unfair competition.[49]

Possibilities for protecting TK associated with arts and crafts exist; such as, for example, the use of geographical indications and appellations of origin for the protection of the 'bogolan' or mud cloth in Mali.[50] Products derived from natural resources indigenous to a specific geographical territory may qualify for protection, provided the concerned name has not yet become generic or semi-generic either locally or internationally.[51] Geographic indications may become generic as a result of the owner's failure to prevent others from using the term for other goods or services not necessarily originating from the region suggested by the geographic indication.[52] The United States allows for the use of 'semi-generic' names; provided a correct appellation of origin is shown 'in direct conjunction' with the semi-generic designation.[53]

Indigenous communities and other interested parties will need to ensure that geographical indications do not become generic or even semi-generic. Domestic protection may include a registration system such as the one used in Europe for wines and spirits.[54] Protection against unfair competition should also be sought outside of the country by opposing or cancelling trademark registration in other countries.[55] In

[45] Article 22(1) of TRIPS.
[46] Article 23 sets forth 'Additional Protection for Geographical Indications for Wines and Spirits'.
[47] Article 22(2)(a) of TRIPS.
[48] Article 22(3).
[49] Article 22(2)(b) of TRIPS.
[50] *WIPO FFM supra* note 7, at 153.
[51] Generic names are those identical with the common name for such goods in a specific region. See the exception to geographical indications contained in Article 24 (6) of TRIPS.
[52] See L. Bendekgey and C. Mead, 'International Protection of Appellations of Origin and other Geographic Indications', 82 *The Trademark Reporter* (1992) 765-792 at 774, stating that courts have held that terms such as 'Swiss cheese', 'Worcestershire sauce' and 'Chablis', for example, are generic.
[53] 26 US C.A. § 5388 I.R.C. § 5388 (c). It includes a list of names such as Burgundy, Claret, Chablis, Champagne, Chianti, Malaga, Marsala, Madeira, Moselle, Port, Rhine Wine.
[54] Watal, *Intellectual Property Rights in the WTO and Developing Countries*, *supra* note 9, at 274.
[55] *Ibid*.

addition, higher levels of protection for geographical indications should be included in bilateral free trade agreements.[56]

Patents

A patent is an exclusive right granted for an invention, being a product or process that offers a new technical solution to a problem.[57] The three criteria for patentability are: (1) novelty; (2) non-obviousness; and (3) usefulness.[58] The granting of a patent gives the patentee the right to exclude others from making, using or selling the invention throughout the territory of the country where the patent has been filed. If the invention is a process, the right extends to the exclusion of others from using, selling or importing products derived from the patented process. This protection is granted for a limited number of years.[59]

In order for TK to benefit from patent protection, it must satisfy the above requirements. Novelty generally means that the patentable inventions should not have been known before. In other words, the invention should not have been anticipated in the 'prior art' anywhere in the world.[60] This requirement constrains the use of patents as a form of protection for TK; since no individual applicant from an indigenous group or local community can realistically claim to have invented the matter at issue. The nature of TK is that it has been passed from one generation to another; and may, furthermore, be known to other members of the community or group as well. It is therefore not new, but has in fact been in the public domain for generations. At the heart of this barrier is the fact that patent law is designed to reward individual creativity. TK is often collectively held; as such, it defies the notion of a single inventor. One commentator has argued, however, that the collective nature of TK production and ownership need not create a barrier to the acquisition of a patent, as many corporations and research institutions already treat patents as collective endeavours.[61]

The second major requirement is that of non-obviousness or 'an inventive step'. This requires that the invention must not be evident to a person of ordinary skill in that particular field.[62] In an effort to provide more insight into this requirement; courts have used considerations such as 'commercial success', 'long felt but unsolved needs', 'failure of others to make the invention', etc.[63] Undoubtedly an inventive

[56] The EU - South African Free Trade Agreement contained specific protection for geographical indications pertaining to wine and spirit for names such as champagne, sherry, port, etc. South Africa will phase out the use of these names and eventually terminate the use thereof altogether. Agreement between the European Community and the Republic of South Africa on Trade In Spirits, OJ 2002 No. L28/113, 30 January 2002.

[57] *WIPO FFM supra* note 7 at 35.

[58] Article 27.

[59] Article 33 of TRIPS provides for a period of 20 years.

[60] Watal, *Intellectual Property Rights in the WTO and Developing Countries*, *supra* note 9, at 91.

[61] Dutfield, *TRIPS-Related Aspects of Traditional Knowledge, supra* note 35, at 245.

[62] Watal, *Intellectual Property Rights in the WTO and Developing Countries*, *supra* note 9, at 92.

[63] See for example *Graham v John Deere Co*. 383 U.S. 1 (1966).

step exists within the realm of TK; however, it is difficult to say who the original 'inventor' was in the context of this requirement. The assumption of knowledge and ideas as an individual construct thus operates against holders of TK. The inventive step may also have occurred generations ago, and would be difficult to trace. It has been noted, however, that TK is not necessarily inert; rather, it is intrinsically innovative and as such intellectual efforts continue to be improved upon and applied in modern times.[64] As it is, the 'test of inventiveness is subjective, since there is always a continuum between inventions and improvements and a determination of which gradation in the continuum rises to the level of inventive step is a function of how that gradation impresses the examiner or the bench'.[65]

The utility criterion ensures that those products or processes that are, although novel and non-obvious, without current practical application, be prevented from being patented. TK would, for the most part, fulfil this requirement as it has been utilized for generations within the community.

In addition to the above requirements, some countries require that the invention be patentable. Thus, for example, scientific theories, discoveries of material or substances already existing in nature, and methods for the medical treatment of humans and animals are either not regarded as inventions, or, if considered inventions, are excluded from patentability.[66]

Outside of the legal requirement for patents, one should also consider practical obstacles. One such challenge is the matter of cost. The cost of filing a patent may be prohibitively high for most TK holders. Finally, there are philosophical difficulties in fitting TK into the broader IP paradigm. IP inculcates definitions of authorship and creation that may be profoundly at odds with non-Western modes of creation. There are also questions as to how indigenous communities view the use and sharing of their own knowledge. Whilst sharing of knowledge is for the very communities entrenched in their cultural values and customary laws and systems; IP law counters these traditions and beliefs and sharing carries a monetary value. Using IP to protect traditional knowledge will bring about a profound shift in how people construct their own practices and cultural values.

3.2.2 Protection via Contract Law

Given the difficulties inherent in applying the classic IPR regime to TK, many countries and communities have taken the more pragmatic route in turning to contract law for a possible solution. Research institutions and pharmaceutical companies have established cooperation agreements with developing country governments and

[64] I. Mgbeoji, 'Patents and Traditional Knowledge of the Uses of Plants: Is a Communal Patent Regime Part of the Solution to the Scourge of Bio Piracy?', *9 Indiana Journal of Global Legal Studies* (2001) 163-186 at 180.

[65] *Ibid*. at 181.

[66] *WIPO FFM*, *supra* note 7, at 36.

indigenous communities, whereby they receive prior informed consent to obtain biotechnological samples and utilize associated TK. In turn they agree to share the profits from any commercial product derived from the biotechnological material with the indigenous communities.[67] The San-CSIR agreement discussed above is an example of such a benefit-sharing arrangement.

Where access to bioresources and associated knowledge and benefit-sharing is not regulated, contractual arrangements take place in the context of the standard contract law. The law of contract creates a number of difficulties: first, it provides limited scope for defining the beneficiaries. Benefits may be restricted to the members of the community signing the agreement. This raises questions about the position of the successors to the community members who were the original contractees. In addition, since only the parties to a contract can enforce it, successors to the original contractees may be left without a remedy if, for instance, the contract is rescinded.

Second, the law of contract assumes relative equality in bargaining strength. The truth of the matter is that most holders of TK do not have the capacity to negotiate fair terms. Even worse is that, in the presence of a regulatory vacuum, a legal agreement depends in large part on whether the research institution possesses the moral (and financial) authority and will to engage the local community.

While there is no prescribed formula for contractual agreements, these can only really protect the interest of TK holders if they are created within a legal framework designed to regulate access to bioresources and associated TK. The South African experience with *hoodia* illustrates the pitfalls of contractual agreements. While South Africa now has legislation that provides for the protection of bioresources, the protection of associated TK and benefit sharing agreements; the agreement between the CSIR and the San community came into effect before legislation was enacted. As a result, the contractual agreement between the San and the CSIR proved to offer no defence against exploitation of both the biological resource and the associated TK. Media attention to the agreement between the two parties, and to the appetite suppressant qualities of the *hoodia*, has led to the rapid growth of a worldwide herbal market for *hoodia*. This has led to unmitigated exploitation of the natural resource and associated TK. It has been reported that illegal harvesting and exports has created the real possibility that the species will become extinct in two years.[68] In addition, the San community's knowledge is being exploited on a massive scale with no real benefits for the community. The San's legal interest is limited to their contractual agreement with the CSIR and given that they do not have a patent on their TK, they cannot effectively protect their knowledge from this exploitation. This illustrates the need for some form of sui generis protection for TK.

[67] E.J. Asebey, 'Biodiversity Prospecting: Fulfilling the Mandate of the Biodiversity Convention', 28 *Vanderbilt Journal of Transnational Law* (1995) 720-754 at 730. See also A. C. Almeida Muller, 'Protecting Biotechnological Inventions in Brazil and Abroad: Draft, Scope and Interpretation of Claims', 13 *Albany Law Journal of Science and Technology* (2002) 145-172 at 153.

[68] 'Hoodia under Threat', *The Daily News* (28 November 2006).

3.2.3 A Sui Generis System

A sui generis approach modifies some of the features of existing IP rights, so as to accommodate the requirements of the specific subject matter at hand. The idea of adapting IP law to fit new subject matter is not a new one. Several areas of IP have evolved to provide for new developments. For example, patent law has expanded to provide protection for business methods; and copyright law has been extended to protect computer software and databases. A number of legislative models exist around the world that have incorporated a sui generis approach in the form of 'collective/communal intellectual rights'.[69]

The OAU Model Law for Protection of the Rights of Local Communities, Farmers and Breeders and for the Regulation of Access to Biological Resources (hereafter Model Law) attempts to provide a model for Africa.[70] The Model law is instructive in many ways. First, it recognizes that in many African countries some form of formal or informal communal control over biological resources does exist. Second, it also recognizes that states may not always be, and in fact have not always been, protective of the rights communities have over their local bioresources; or have not always ensured that communities benefit from their own knowledge and practices. Third, it acknowledges that traditional ecological knowledge and practices often differ significantly from Western concepts of intellectual property and, as such, warrant dissimilar protection. It recognizes 'Community Intellectual Rights' as rights that are enshrined and protected under community norms and practices and customary law.[71] Article 16 of the Model Law specifically acknowledges the rights of communities over their biological resources and knowledge; the right collectively to benefit from the use of their biological resources; and the utilization of their knowledge, innovations, practices and technologies.[72]

Whilst Article 17 of the Model Law provides for the recognition and protection of community rights under the norms and practices of customary law; Article 23 reinforces the idea of placing upon the communities themselves the responsibility of de-

[69] Some of these countries include Bangladesh, Brazil, Costa Rica, India, Peru, Philippines and Thailand. See GRAIN, *Community Rights,* available at <http://www.grain.org/brl/comm-brl-en.cfm> (visited 7 May 2003).

[70] In April 1998, the then Organization for African Unity (OAU) (now known as the AU), through its Scientific, Technical and Research Commission initiated a draft Model Legislation on Community Rights and Access to Biological Resources. At the 34th Summit of Heads of State in 1998 a decision was made that Governments of Member States should formally adopt the Model Law. This initiative represents an attempt to provide an ideal legal framework for member states to develop their own policies, laws and regulations on access to bioresources.

[71] Article 1 defines a 'Local Community' as a 'human population in a distinct geographical area, with ownership over its biological resources, innovations, practices, knowledge, and technologies governed partially or completely by its own customs, traditions or laws'.

[72] It states: 'the State recognises the rights of communities over the following:
their biological resources; the right to collectively benefit from the use of their biological resources; the right to collectively benefit from the utilisation of their innovations, practices, knowledge and technologies; their rights to use their innovations, practices, knowledge and technologies in the conservation and sustainable use of biological diversity; the exercise of collective rights as legitimate custodians and users of their biological resources.'

termining what constitute those rights.[73] It specifically notes that such community rights are IP rights that are inalienable and, as such, protected from appropriation.[74] Furthermore, protection of ideas and practices exists without the requirement of a positive act such as registration; and prior publication of TK does not preclude the local community from exercising the intellectual right.[75]

Another 'collective' approach can be found in Costa Rican legislation, which uses as a departure point the recognition of the existence and validity of forms of TK and the need to protect them.[76] It does not, however, require prior registration, or even prior declaration, or explicit recognition in order for these rights to exist. As such it includes also future forms of TK. The process for defining the nature and scope of the right itself is a participatory process with the community itself;[77] and the legal format is an inventory of community practices, which is then registered21.[78] The Philippines has a similar communal right by way of a registered inventory; and it specifically provides for the equitable sharing of benefits derived from such a right.[79]

An issue to consider is whether these collectively owned and exercised rights are compatible with the TRIPS Agreement. The preamble of TRIPS specifically provides that 'intellectual property rights are private rights'. The question would be whether this provision expressly relates to the IP rights enumerated in the agreement. IP rights, such as patents, copyright, etc, are for the most part privately owned and exercised. As indicated earlier, however, this is no longer necessarily the norm. Furthermore, the notion of establishing a sui generis right is derived from the vacuum that exists within the realm of IP to cover those areas that do not fit under traditional conceptions of intellectual property. A sui generis right, therefore, would not have to be tailored as a traditional IP right. As such, the 'private right' provision of TRIPS would not apply to a sui generis right.

One solution could be to recognize TK as a 'category of intellectual property rights'.[80] This would provide States with the option of framing the right as a collective right if the nature of TK in their jurisdiction is primarily communal.

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[73] Article 23(2) states that '[a]n item of community innovation, practice, knowledge or technology, or a particular use of a biological or any other natural resource shall be identified, interpreted and ascertained by the local communities concerned themselves under their customary practice and law, whether such law is written or not'.

[74] Article 23(1).

[75] Articles 23(3) and (4).

[76] Articles 77 and 82 of Biodiversity Law 7788 (1998), available at <http://www.grain.org/brl/costarica-biodiversitylaw-1998.cfm> (visited 10 November 2003).

[77] Article 83.

[78] Article 84.

[79] Section 2 of Philippines Community Intellectual Rights Protection Act (2001), available at <http://www.grain.org/brl/phillipines-cirpa-2001-en.cfm> (visited 10 November 2003).

[80] *Ibid.*

4. Conclusion

Knowledge related to the customs and practices derived from bioresources should not fall prey to unregulated appropriation. Comprehensive legal protection of traditional knowledge, therefore, requires a response that is pragmatic, yet innovative.

This chapter highlighted various legal mechanisms that are available to protect traditional knowledge. In this regard the usefulness of conventional legal machinery such as IP rights and contract law and ways in which it can be interpreted to accommodate the more amorphous traditional knowledge systems cannot be taken lightly. A comprehensive legal framework, however, requires innovative responses that could be accommodated both in international, regional and domestic legal frameworks.

Access and Benefit-sharing: The Brazilian Legal Framework and the Necessity for a Legally Sound and Long-term International Solution

Larissa Schmidt[1]

1. Introduction: the Convention on Biological Diversity

The Convention on Biological Diversity (CBD)[2] was signed in 1992, during the United Nations Conference on Environment and Development (UNCED); and was ratified by Brazil five years later, through Legislative Decree 2.519, published on March 16, 1998.

The CBD defines 'biodiversity' as:

> '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.'[3]

The CBD provides for the right of States to exploit their own resources pursuant to their own environmental policies, but with the responsibility for ensuring that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.[4]

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[1] M.Sc., Brazilian environmental lawyer; Technical Adviser, Ministry of the Environment, Brazil. The author's views expressed in this article are related to a doctoral thesis which is being developed at the University of Brasilia, Brazil, and they do not reflect the views of Brazilian national authorities on the Convention on Biological Diversity.

[2] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>.

[3] Article 2.

[4] Article 3.

Megadiverse countries[5] include Bolivia, Brazil, China, Colombia, Costa Rica, the Democratic Republic of Congo, Ecuador, India, Indonesia, Kenya, Madagascar, Malaysia, Mexico, Peru, The Philippines, South Africa and Venezuela. Being a megadiverse country means that it is possible to be a supplier of genetic resources.[6] According to the Convention, the resources can be collected 'from *in-situ* sources, including populations of both wild and domesticated species, or taken from *ex-situ* sources, which may or may not have originated in that country'.[7]

Nowadays, it can be estimated that the potential use of only 1% of tropical plants has been investigated. According to the World Health Organization (WHO), 80% of the populations of developing countries make use of traditional medicine, and 85% of that medicine includes extracts from medicinal plants.[8] Furthermore, the biotechnology market is dominated by the United States (US). That country holds the largest number of genetically modified products in the world. Japan is the major US competitor in the field of biotechnology,[9] but the difference between them is that the US is not a party to the CBD. This difference has created difficulties for the implementation of a fair and equitable international regime which could protect biodiversity and the access to it.

Discussions in the CBD are trying to deal with the many different national positions as held by developed countries and developing megadiverse countries. For more than a decade, discussions among Parties did not create solid results or reach an agreement on a sui generis international regime to regulate access and benefit sharing, as can be seen in the discussion presented below.

In this regard, the positions of different countries in negotiations can be very explicit. In 1995, Japan presented a preparatory document for an Ad Hoc Group on Access and Benefit Sharing which emphasized the worldwide importance of biotechnology; while stating, on the other hand, that:

> 'according to a survey targeted to bio-related industries, such as pharmaceutical and cosmetic industries, a low level of interest in research that uses genetic resources from foreign countries was revealed. In conclusion, excessive regulation on access and benefit–sharing in provider countries would affect companies and lead to a reduction of activity or even withdrawal from genetic resources-based business.'[10]

[5] Megadiverse countries have greater than average concentrations of biodiversity.
[6] According to the CBD, "genetic resources" means genetic material of actual or potential value.
[7] Article 2.
[8] Joselito Santos Abrantes, *Bio (socio) Diversity and Environmental Business in Amazon Forest* (Garamond, 2002) at 14.
[9] *Ibid.* at 73.
[10] CBD, Ad hoc open-ended wotrking group on ABS, Compilation of views, information and analysis on the elements of the international regime on access and benefit-sharing, UN Doc. UNEP/CDB/WG-ABS/3/3 (2005).

Megadiverse countries, on the other hand, defend the need to respect the prior consent of indigenous people and local populations to utilize traditional knowledge. Brazil strongly supported the 'recognition and protection of the rights of indigenous and local communities to their traditional knowledge associated with genetic resources subject to the national legislation of the countries where these communities are located.'[11] To this end, it is fundamental to implement an international regime to promote, firstly, the sustainable use of genetic resources; and secondly, to promote the right of local populations (including indigenous people) to choose whether they will grant access to their particular knowledge and the ways in which that access is granted.

We can see in the context of CBD negotiations that the results are influenced by different concerns and interests. Some developed countries resist adopting a binding regime on access and benefit-sharing of these genetic resources. On the other hand, megadiverse countries like Brazil support the implementation of a legally binding regime in order to share the benefits derived from the application of technology to biological systems, living organisms or derivatives. Hence, the regime must surely be an international 'hard law' instrument in order to achieve an effective distribution of benefits to megadiverse countries and to establish clear mechanisms for dispute settlement.

The position of Brazil as a megadiverse country cannot be disputed. The Amazon Forest alone holds 'half of the world's plant and animal species with an undetermined potential for commercial use.'[12] According to Enriquez,

> 'we can calculate the existence of approximately 55 000 higher plant species that are utilized as input for the pharmaceutical or cosmetic industry (…). That calculation is based on the region's biodiversity which demonstrates the need to foster research and additional studies in that region.'[13]

Within the scope of the CBD international regime, discussions have been governed by the Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of Benefits Arising out of their Utilization, which are voluntary rules negotiated in 2001.[14] The Bonn Guidelines suggested a regime based on national or regional strategies for the sustainable use of biodiversity with the implementation of Prior Informed Consent (PIC) involving all relevant stakeholders and respecting the rights of indigenous and local peoples. In 2004, negotiations on an Access and Benefit Sharing Regime began. These were based on the Bonn Guidelines, although Article 15 of the Convention provides for the possibility of regulating access and

[11] *Ibid.*
[12] Santos Abrantes, *Bio (socio) Diversity, supra* note 8, at 78.
[13] *Ibid.*
[14] Decision VI/24, in UN Doc. UNEP/CBD/COP/6/20 (2001).

benefit-sharing in national law systems.[15] As countries have sovereign rights over their natural resources, the authority and the means of determining access to genetic resources rest with national governments and can be subject to national legislation.

Access and benefit-sharing are defined in Article 15 of the CBD as follows:

> 'access, where granted, shall be on mutually agreed terms and subject to prior informed consent of the Contracting Party providing such resources, unless otherwise determined by that Party.'

In addition, Article 15 establishes that each Party 'shall take appropriate legislative, administrative or policy measures with the aim of sharing in a fair and equitable way.' The results of research and development and the benefits arising from the commercial and other utilization of genetic resources shall be shared with the contracting party providing such resources. Such sharing shall be upon mutually agreed terms. On that subject, Brazil has already implemented specific rules on PIC, which are explained below.

2. National system for biodiversity governance in Brazil; and the legal framework for access and benefit-sharing

The conservation of natural resources includes the idea of research and strengthening of conservation of biodiversity in *in situ* and *ex situ* conditions; as well as the preservation of the identity and practices of local and indigenous communities. Considering the importance of preserving biodiversity resources, and in order to prevent undue access to it, Brazil has developed an institutional and legal framework aiming to provide good governance practices on access and benefit-sharing for traditional and indigenous people.

A very large administrative structure for preserving biodiversity has been created. This system includes programs coordinated by the Ministry of the Environment and implemented by national and local agencies. All programs are supported by a broad environmental law system that enables the implementation of Article 225 of the 1988 Brazilian Constitution. This provides for the principle of sustainable development, the precautionary principle, environmental education, and the possibility of imposing penal and administrative sanctions without prejudice to the obligations of those who broke the law (individuals or legal entities) to repair damage caused to the environment, in the case of procedures and activities considered harmful to the environment. Moreover, Article 225 of the Brazilian Constitution provides for specific actions to protect biodiversity, making the Government responsible for:

[15] The Seventh Meeting of the Convention of the Parties (in 2004) also considered initiating discussions related to an internationally binding regime.

a) preserving and restoring the essential ecological processes and providing for the ecological treatment of species and ecosystems;
b) preserving the diversity and integrity of the genetic heritage of the country and controlling entities engaged in research and manipulation of genetic material;
c) defining, throughout the whole country, territorial areas and their components that are to receive special protection, and in which any alterations and suppressions are only allowed by law; any use of these areas that can harm the integrity of the characteristics that justify their protection is forbidden; and
d) protecting the fauna and the flora, prohibiting, in the manner prescribed by the law, all practices that represent a risk to their ecological function, cause the extinction of the species or that subject animals to cruelty.

Thus, the national governance system for biodiversity includes the National Program for Protected Areas, the National Forest Program and a large number of protected areas.

Notwithstanding these programs, it is extremely important to implement other concrete measures to protect fauna and flora; and to regulate their utilization. Brazil has undertaken efforts to adapt its public policies to ensure both the use and preservation of its genetic resources; especially the implementation of the National Biodiversity Policy, which is currently undergoing discussions in the Brazilian Congress. Some principles must be followed to protect biodiversity adequately, including financial resources or other kinds of compensation for suppliers of raw material or knowledge, in the case of access of biodiversity for research or bioprospecting.[16]

Hence, the sustainable use of biodiversity must comprise political, legal and economic tools. As indicated before, to access genetic resources in *in situ* conditions, the Biodiversity Convention determines that the institutions responsible for research and bioprospecting must obtain, in writing, prior informed consent (PIC) from the local government. An important step in consolidating this procedure in Brazil was the enactment of Provisional Act No. 2,186-16 for implementing the provisions of Article 225 of the Federal Constitution.[17]

In 1998, an important law was added to the national legal framework: the Environmental Crimes Act. This provides sanctions for criminal conduct committed against fauna and flora; and establishes heavy fines for all kinds of pollution. Nevertheless, this act did not criminalize conduct against genetic heritage. Therefore, the removal

[16] Provisional Act No. 2,186-16, in its Article 7, item VII, defines bioprospecting as an exploratory activity that aims to identify genetic heritage components and information on associated traditional knowledge with potential for commercial use.

[17] A Provisional Act has the same degree of enforcement in Brazilian legislation as a law, since it must be approved by the National Congress within 30 days or else become valid.

of plants or animals, and obtaining knowledge from a specific community without permission, were not considered criminal actions.

The Brazilian Government tried to solve the problem by enacting administrative regulations. In June 2005, Federal Decree No. 5,459 was enacted providing sanctions in the case of violations in the access to genetic heritage or disrespect of associated traditional knowledge. The Decree establishes significant fines that can be applied by the Federal Government.[18] Article 7, item II of the abovementioned Provisional Act No. 2,186-16/2001 defines associated traditional knowledge as 'individual or collective information or practice of the indigenous community or local community associated to genetic heritage, with real or potential value.'

At the administrative federal level, the Genetic Heritage Management Council, a regulatory and deliberative body created in 2001, is responsible for controlling the access and benefit-sharing related to associated traditional knowledge. The Genetic Heritage Management Council has published approximately 20 Resolutions. Resolution 11 established rules with mandatory clauses to be followed by the institutions interested in accessing Brazilian natural resources. Some requirements involve the correct management of natural resources, an economic benefit-sharing basis, the procedures to transfer those benefits, their periodicity and the period of the obligation. In this way, the contract must ensure terms and conditions for access and benefit-sharing, including technology transfer. Council Resolution 9 sets guidelines for obtaining prior consent from indigenous people and local communities in the case of genetic research resulting from access in areas where these tribes or communities are located.

The importance of this legislation is evident because, in general, these populations live in areas with huge concentrations of biodiversity, like the Amazon Forest and, on a smaller scale, the Atlantic Forest. Particular groups have resided for many generations in these natural habitats, subsisting on these natural resources. In Brazil, the preservation idea was originally developed in the extractive reserves, because 'of the rubber tappers [...], who were the pioneers of that experience'.[19] However, in addition to traditional communities, Brazil has a huge and diverse indigenous population distributed throughout different parts of the country. Approximately 215 indigenous communities, 55 isolated indigenous groups and, at least, 180 distinct languages have been identified.[20] The Convention on Biodiversity and Agenda 21, the action programme for sustainable development adopted in 1992, categorically recognize the relevant role of indigenous people and traditional communities in preserving natural resources, and Brazil is implementing measures to protect communities and their knowledge.

[18] The Federal Government can apply fines of up to 15 million reais (almost US $6 million).
[19] Ministry of the Environment, Brazil, Doc. MMA/SBF (2001) at 117.
[20] Information available at <http://www.redegoverno.gov.br/defaultCab.asp?idservinfo=40099&url=http://www.funai.gov.br/indios> (visited 30 May 2007).

Moreover, at the international level, Brazil is working to avoid undue trademark registrations of biodiversity names or products. Between 2005 and 2006, Brazil had an improper registration cancelled in Japan, the European Union and the United States for 'cupuaçu,' an Amazon Forest fruit used in the production of chocolate products.[21] Trademarks with 'common' names, such as 'banana' are not allowed. However, with the cases of cupuaçu and others, 'the list with the various descriptions of Brazilian biodiversity and their uses with local communities is going to be integrated into an even greater data bank containing lists of the products of other participating countries, which is being organized through the Amazon Cooperation Treaty Organization (ACTO).'[22]

A list of names of Brazilian biodiversity was sent to trademark registration offices in 2006. Some studies have indicated that more than 1 000 patents covering 40 species were granted after the CBD went into force. With regard to illegal appropriation, other initiatives are underway. *ACTO* **c**ountries have taken a series of measures to protect their biodiversity from the actions of the appropriation of trademarks. The Brazilian Ministry of the Environment has concluded a wide-ranging mapping of the descriptions and known uses of close to 9,000 animal and plant species. This list was then sent to the Brazilian Interministerial Group for Intellectual Property to be analyzed by INPI (National Industrial Property Institute) and will be part of a database made available for the consultation and guidance of patent applicants throughout the world.[23]

Despite all of these technical and political measures structured by Brazilian authorities with regard to prevent illegal access of Brazilian biodiversity, the problem of biopiracy remains. The Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA) estimates that illegal activities relating to biopiracy are very profitable, amounting to 'around US$ 60 billion a year [...], including the monopolization of associated traditional knowledge.'[24] Thus, it is necessary to encourage the implementation of national legislation and to strengthen environmental governance in megadiverse countries; as Brazil is not the only country threatened by biopiracy. Ratification, in Brazil, of the Biodiversity Convention was a trigger for the national implementation of legal regulatory instruments capable of providing enforcement measures intending to diminish illegal access and biopiracy. This provides a reason why is important to establish a legally sound and long-term solution relating to access and benefit sharing.

[21] The Cupuaçu tree is native to the southeast of Para, Brazil, where it represents a constituent of the medium stratum of the terra-firma rain forest. Its considerably big fruits (1-2 kg fresh weight) consist of a lignified husk encasing 20-45 seeds which are surrounded by a very aromatic pulp. In turn, this constitutes about 35-45 % of the fruit's fresh weight. It can be used for manufacturing chocolate-like foodstuffs.

[22] Cláudia Izique, *Countries from within the Amazon basin discuss group measures to protect their biodiversity*, (2001), available at <http://www.revistapesquisa.fapesp.br/?art=1530&bd=1&pg=1&lg=en> (visited 30 May 2007) at 114.

[23] *Ibid.*

[24] GTA, *National position on benefit-sharing (CDB),* available at <http://www.gta.org.br/noticias_exibir.php?cod_cel=847> (visited 30 May 2007).

3. The necessity for a new, broader international regime

Common international strategies are required to achieve better sustainable results for preserving biodiversity and human development. It is paramount to implement efficient global measures to protect biodiversity, but many problems remain to be solved. A particular one is linked to traditional or indigenous knowledge which was published before the CBD came into being. One of the issues relates to the possible rights of those communities to demand benefits from knowledge collected and accessed decades before the CBD implementation.

From the point of view of international law, the problem is that it may be impossible retroactively to apply an international agreement unless the Parties involved expressly recognize the retroactivity. According to Article 28 of the Vienna Convention on the Law of Treaties[25] (1969), unless a different intention appears from the treaty or is otherwise established, its provisions do not bind a party in relation to any act or fact which took place or any situation which ceased to exist before the date of the entry into force of the treaty with respect to that party. And, considering that the CBD does not provide for a possibility to retroact, the problem could be solved only by politic means. Furthermore, the general rule is that a treaty creates neither rights nor obligations for third states (that is, states that are not parties to the treaty).[26]

Nevertheless, the issue seems much more complex, because, as explained by some Brazilian non-governmental organizations, since the first Europeans arrived in countries like Brazil

> 'plants have been collected in a systematic way. During many of these collections, people took note of the traditional knowledge of the utilization of these plants, all of which are dry and pressed, with the proper notes from the notebook on their labels. Thus, many of the foreign herbaria obtained huge collections of traditional knowledge based on Brazilian plants, old collections that go back to the first botany expeditions in Brazil.'[27]

Before the CBD came into effect, many national researchers were not aware of the need to ascertain the origin of traditional knowledge. This and other similar situations remain a point of contention and cannot be solved by traditional law concepts. We must consider that indigenous people are 'different societies, considering their juridical, cultural, economic and spiritual aspects, organized from a collective

[25] Vienna Convention on the Law of Treaties, Vienna, 22 May 1969, in force 27 January 1980, 1155 *United Nations Treaty Series* 331.

[26] Peter Malanczuk, *Akehurst's Modern Introduction to International Law* (Routledge, 7th revised ed., 1998) at 137.

[27] 'As encruzilhadas da modernidade' in Fernando Mathias and Henry de Novion (eds), *Debates on biodiversity, technoscience and culture* (São Paulo Intituto Socioambietal, 2006) at 31.

perspective.'[28] Therefore, traditional (European) law based on ordinary property rights is not adequate to deal with new rights. Social and collective rights demand a new perspective of law – a perspective capable of embracing ethnographic concerns and respect for difference. According to Santilli, traditional knowledge is produced and generated in a collective way, with a broad base of ideas, changes and information, and transmitted orally from one generation to another. Thus, intellectual rights related to traditional knowledge must be distributed 'in a collective way, based on proper social and juridical institutions of those peoples, in a way to strengthen their collective instances of decision.'[29]

On the other hand, problems related to patent systems are caused by their being based on individual innovations or, even when this is not the case, the individual identification of authors or 'inventors'. This leads to knowledge fragmentation and dissociation from the context from whence they are produced and shared in a collective way.[30] The question must therefore be asked how a new regime might address these problems?

A partial solution could include the discussion of the concept of ethnographic regions, applying the 'collective benefit-sharing' approach. Traditional knowledge originating from indigenous peoples can be found in different territories; but, in general, in the same geographic region. The example of 'ayahuasca' might be referred to, the medicinal properties of which are known and used by ten indigenous Amazon peoples who live in Brazil and Peru. Additionally, the Ashaninka people live in both Brazilian and Peruvian territories and share a vast amount of environmental knowledge.[31]

The idea of combining two or more local populations is more likely to be feasible at national level, of course; and, considering that it is not forbidden by article 15 of the Biodiversity Convention, each Party can create conditions to facilitate access to genetic resources for environmentally-sound uses. Access, where granted, shall be on mutually agreed terms. This means that if prior informed consent is respected and the benefits arising from the utilization of genetic resources are considered, there would be no objections to establishing a collective means of distributing the benefits.

[28] Fernanda Kaigang, 'The crossroads of modernity: from the struggle of indigenous people in Brazil to the fate of the CBD' in Fernando Mathias and Henry de Novion (eds), *Debates on biodiversity, technoscience and culture* (São Paulo Intituto Socioambietal, 2006) at 42.

[29] Juliana Santilli, 'Immaterial heritage and collective propriety rights' in Fernando Mathias and Henry de Novion (eds), *Debates on biodiversity, technoscience and culture* (São Paulo Intituto Socioambietal, 2006) at 91.

[30] *Ibid.* at 86.

[31] *Ibid*. at 90.

It remains difficult, however, to see it might be possible to encompass two distinct populations located in different countries. Some ideas must be discussed in the context of CBD negotiations. First of all, it is necessary to achieve consensus to utilize ethnographic regions at a regional level, for example. Another alternative could be the creation of a special international fund, using a small part of the resources obtained from contracts negotiated with local communities and private companies; which fund could contribute to solve problems related to indigenous peoples or local communities living in the same ethno-region but being from different countries.

It is well known, however, that benefit-sharing from traditional knowledge is something very hard to implement. Padmashree argues that bioprospecting is the biggest victim of the lack of clarity in the CBD; because, without first settling these issues, the roles and responsibilities of users and providers cannot be set out in terms of national bioprospecting frameworks.[32]

Notwithstanding this situation, it is vitally necessary to put forward the discussion and to expend considerable effort to establish equitable benefit-sharing because this factor, among others, could help for avoiding a global biodiversity collapse.

4. Conclusion

We must say that benefit-sharing from traditional knowledge is just one small part of the discussion. It is necessary, first of all, to improve the means of protecting biodiversity. At the Brazilian national level, for example, the Amazon Forest alone represents more than 60% of the national territory and 12% of the Brazilian population call it their home. However, it is only responsible for 7% of the GDP. It is also the habitat of more than 30 000 identified species, representing 10% of all species in the world.[33] With a view to protecting this entire area, some new command and control measures have been taken by the Brazilian national authorities. These new polices could help other megadiverse countries to prevent losses related to biodiversity at national level. The policies include, among others:

a) preventive measures, including support for regional projects, actions to inform and prevent illegal access to traditional knowledge of indigenous communities;
b) governmental cooperation, since 2005, among the Ministry of the Environment, the Brazilian Institute for the Environment and Renewable Natural Resources (IBAMA), the National Police and the Brazilian Intelligence Agency (ABIN) to prevent biopiracy;

[32] Gehl Sampath Padmashree, *Regulating Bioprospecting. Institutions for Drug Research, access and benefit-sharing* (United University Press, 2005) at 44.
[33] Santos Abrantes, *Bio (socio) Diversity, supra* note 8, at 13.

c) control measures in airports and postal agencies; and
d) capacity building, including the creation of an Environmental Capacity Building Center for National Police in the Amazon Forest (Manaus).

Finally, at the international level, as has been suggested in this paper, it is urgent to find a legally sound long-term international solution relating to access and benefit-sharing. It is necessary, at least, to create a medium-term solution between megadiverse and developed countries as '[f]or many developing countries, it symbolizes control over their "own" resources so that they could have a better say in the terms of their exchange. At the same time, developed countries also wanted genetic resources preserved from the point of view of their unrealized economic potential in the fields of medicine and other sciences.'[34]

We can add, however, that benefit-sharing concerns far more than just economic benefits. On that matter, it is important to consider the objectives of the Convention on Biological Diversity; which objects embrace conservation, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including appropriate access to genetic resources and appropriate transfer of relevant technologies – taking into account all rights over those resources and technologies – as well as appropriate funding. Thus, it is fundamental to implement an international regime to promote, firstly, the sustainable use of genetic resources; and, secondly, the rights of local populations who are directly associated with those resources.

[34] Padmashree, *Regulating Bioprospecxting, supra* note 32, at 46.

The Threat to Biodiversity Posed by Alien Species Transported in Ballast Water: The 2004 Ballast Water Convention

Kuphakwenkosi Peggy Gumede[1]

1. Introduction

Alien organisms consist of plants, animals and micro-organisms which do not naturally occur in an area, and which are deliberately or accidentally introduced by humans to ecosystems outside of their natural range**.** The introduction of alien species through ballast water has been held by the International Maritime Organisation (IMO) to be among the four greatest threats to the world's oceans. The other three are land based sources of marine pollution; the over-exploitation of living marine resources; and alteration or destruction of the marine habitat. The danger posed by ballast water has been heightened over the years by increased world trade; and by the construction of larger and faster ships. Increased world trade has seen an increase in the estimated annual amount of ballast water being transferred to and fro. This estimation currently stands at approximately 10 billion tonnes of ballast water transferred globally.[2] The fact that ships are faster means that there is an increase in the chances of survival of the organisms ferried in ballast water. All of these changes in trade practices mean that there is urgency to the need to resolve the pollution problem caused by ballast water.

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[2] 'Alien invaders in ballast water – New convention to be adopted at IMO: International Convention on Ballast Water Management 9-14 February 2004', available at <http://www.imo.org/About/mainframe.asp?topic_id=848&doc_id=3455> (visited 12 May 2007).

2. What is ballast water?

Ballast water is defined in the Ballast Water Convention as 'water with its suspended matter taken on board a ship to control, trim list, draught or stabilize a ship'. The ballast water counteracts the buoyancy, gives added stability, limits hull stresses, and improves steerage. Once a ship has discharged its cargo it will normally pump ballast water into its tanks before it leaves port and then discharge the ballast water, and any sediment in the ballast tanks, in or near the port of destination and the tank is thoroughly cleaned, this process is known as 'de-ballasting'. It is during this process that pathogens, micro-organisms and other invasive species most probably in their planktonic stages are taken up with water from another area and introduced to unfamiliar territory.[3]

The danger of the introduction of foreign species is that once they are introduced to new and unfamiliar territory they have the capacity to destroy the delicate balance of local ecosystems. Unlike oil spills, that can be contained and controlled, there is no 'cleaning up' of these organisms; hence, in the absence of other organisms that can feed on them, they (can) cause great destruction. Moreover, the potential harm they pose not only to the environment but to humans as well is still unclear. Therefore, one cannot rule out deaths which could be related to the new species.[4]

An example of the problems caused by alien species is that of Chinese crabs.[5] These omnivorous predators, which originate in the Far East and have since invaded the River Thames in the United Kingdom, are believed to have been ferried through ballast water. The crabs have shown uncontrolled population growth, and have burrowed into the unprotected river bank, causing erosion and resulting in collapses of the natural river bank. They also greatly depleted the local crayfish population.[6] Furthermore, these crabs have fluke parasites; which, if not destroyed completely during the preparation stage, can be transferred to humans thereby posing a threat to human health.[7]

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3 *Ibid.*

4 For example, by way of toxic and harmful algal blooms. See <http://www.bigelow.org/hab/saf.html> (visited 12 June 2007). South Africa experienced red tides in 2004 which led to massive crayfish casualties. Red tides are a result of algal blooms and these blooms are also believed to have been introduced through contaminated ballast water. Red tides are phytoplankton blooms in the sea which, due to their intensity, colour the water yellow, red or brown. The damaging effect of red tides occurs when the blooms are composed of dinoflagellates - neurotoxins which are contained in dinoflagellates *Gonyaulax* accumulate in bivalve molluscs and, if not destroyed during the preparation of the mollusks, can cause paralytic shellfish poisoning resulting in illness and even death in human beings.

5 'Invertebrates commonly found in the United Kingdom in the tidal Thames', available at <http://www.thames-explorer.org.uk/about_the_river/invertebrates.html> (visited 15 December 2006).

6 R. Robbins, P. Clark and P. Rainbow, 'Mitten Crabs: Oriental Invaders of the River Thames', available at <http://www.fathom.com/feature/122096/> (visited 12 March 2007).

7 San Diego Project Pacific 2000-2001: 'Invasive species; America's least wanted', available at <http://www.projectpacifie> (visited 15 December 2006).

Although the introduction of these species to the River Thames could arguably be viewed as a change for the better, as there is the introduction of a potential food species to the marine environment; what happened in this case was that the crabs upset the delicate ecosystem which was unable to absorb or counter the needs of the new organism. In addition, the absence of other organisms or predators that feed on the foreign species led to the exotic species multiplying uncontrollably.[8]

3. The history of problems caused by ballast water

It has been argued that the problem of invasive alien species was first noted by scientists in 1903, when the Asian phytoplankton algae *Odontella* (known also as *Biddulphia sinesis*) was found in vast quantities in the North Sea.[9] However, it was arguably not until 1988, when the International Maritime Organization's (IMO) Marine Environment Protection Committee was approached by Canada and Australia in regard to the problem of alien species[10] that states took a firm step toward acknowledging the seriousness of the dangers posed by invasive aliens.

4. The history of the Convention

The Ballast Water Convention gives effect to various international conventions and conferences which include the 1982 United Nations Law of the Sea Convention (UNCLOS),[11] United Nations Conference on Environment and Development (UNCED) of 1992; and the World Summit on Sustainable Development (WSSD) of 2002. Article 196 of the UNCLOS encourages states to 'prevent, reduce and control the introduction of species, aliens or new to a particular part of the marine environment if it may harm or cause other negative changes to the thereto'. The participants of the UNCED were also called upon to ensure the prevention, reduction and control of degradation of the marine environment from sea based activities. The Agenda 21 guidelines encouraged states, acting individually, bilaterally, regionally and multilaterally, to 'assess the need for additional measures to address degradation of the marine environment… (a) from shipping by… (iv) Considering the adoption of appropriate rules on ballast water discharge to prevent the spread of non-indigenous organisms.'[12]

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[8] See <http://www.nhm.ac.uk/nature-online/life/other-invertebrates/chinese-mitten-crabs/chinese-mitten-crabs.html> (visited 20 May 2007). Although these crabs are a delicacy in China they are not regardeds as such in the UK; thus it can only be hoped that this new potential source of food for humans will soon become as well appreciated in the UK as it is in China. With the damage they are causing with regards to the loss of crayfish, there will be an obvious upset of the balance that should exist in the food chain.

[9] 'Alien Invaders in Ballast Water', *supra* note 2.

[10] *Ibid*.

[11] United Nations Convention on the Law of the Sea (UNCLOS), Montego Bay, 10 December 1982, in force 16 November 1994, 21 *International Legal Materials* (1982) 1261, <http://www.un.org/Depts/los/index.htm>.

[12] Agenda 21, UN Doc. A/CONF.151/26/Rev.1 (1992), chapter 17 para. 30(a)(vi).

In 1993 the IMO responded to this concern by drafting the *Guidelines for the Control and Management of Ship's Ballast Water*. In 2002 the issue of the management of ballast water was raised yet again at the WSSD held in Johannesburg where the Summit urged states to implement plans for sustainable development and enhance maritime safety and protection of the marine environment through actions at all levels to 'accelerate the development of measures to address invasive alien species in ballast water'.[13] Furthermore, the IMO was encouraged at this summit to finalize its draft International Convention on the Control and Management of Ships' Ballast Water and Sediments.

The Convention[14] was officially adopted on the 13th of February 2004 in London and of the 74 states that were represented at the Conference, six of those have since ratified the Convention. These are Argentina, Australia, Brazil, Finland, Maldives, The Netherlands, Spain and Syrian Arab Republic. These nations constitute a mere 0.62 of the world tonnage of the requisite 35% needed for the Convention to came into force.

5. Objectives

The objectives of the Convention are clearly stated to be to ensure the prevention, minimisation and, ultimately, the elimination of the risks to the environment, human health, property and resources caused by the transfer of harmful Aquatic Organisms and Pathogens and this will be attained through the control and management of ships' ballast water.[15] The Convention accepts that world-wide cooperation is necessary to curb, and eventually to eliminate, all transfers of harmful aquatic organisms and pathogens through ballast water and sediments.

5.1 Rights and responsibilities of the parties

Parties are given the right to take, individually or jointly with other Parties, more stringent measures with respect to the prevention, reduction or elimination of the transfer of harmful aquatic organisms and pathogens through the control and management of ships' ballast water and sediments, consistent with international law. Parties should ensure that ballast water management practices do not cause greater harm than they prevent to their environment, human health, property or resources, or those of other States.

Parties have the right, either individually or jointly with other parties, to engage in other measures in respect to the prevention, reduction and or elimination of alien

[13] Plan of Implementation of the World Summit on Sustainable development, UN Doc. A/CONF.199/20 (2002), para. 34(b).
[14] International Convention for the Control and Management of Ships' Ballast Water and Sediments, London, 13 February 2004, not yet in force.
[15] Art. 2(1).

organisms. This can be done through national policies, strategies or programmes for ballast water management. However, these strategies should not cause greater harm to the environment, human health and property of the concerned state. South Africa is, for example, drafting a Ballast water policy to address the particular problem.[16] Furthermore, the Convention states that such endeavours must not cause greater harm to the environment, to human property or to resources.

It is, according to the Convention, the responsibility of member states to encourage ships entitled to fly their flag of convenience to avoid, as much as possible, the uptake of ballast water or sediments which contain potentially harmful organisms and pathogens.[17] Each party must ensure that in all its ports and terminals where cleaning of ballast tanks occur have adequate facilities for the safe disposal of sediments and or ballast water. This must be done without unduly delaying ships or compromising human safety or damaging the environment, property or other States. Where such facilities are found to be inadequate, the parties concerned must notify the Organisation.[18] Each party must endeavour to promote and facilitate scientific and technical research on ballast water management and monitor the effects of this in their jurisdiction. In furtherance of the objectives of the Convention, this information must be made available to other parties who request it on technical measures undertaken as well as the effectiveness of Ballast Water Management deduced from any monitoring assessment.

Violations of the provisions of the Convention within the jurisdiction of any party must be prohibited and, wherever such violations occur, the severity of the sanctions must be such as will deter further disregard of the Convention's provision. For the purposes of ensuring compliance with the Convention, a ship subject to its provisions may, at any port or terminal, be subject to inspection by duly authorised officers.[19] A ship that is detected to be in violation of the Convention, either by a Party entitled to fly the flag or the Party in whose port or offshore terminal the ship is operating, may in addition to the above mentioned sanctions take steps to warn, detain or exclude the ship. And in the event that a ship poses a threat to the environment or human health, the ship should be prohibited from discharging ballast water until the threat has been removed.

The Convention requires all ships to exchange ballast water 200 nautical miles from shore or, at the very least, 50 nautical miles from shore and in waters that are approximately 200 meters deep. In the event that this cannot be done, it is recommended that there be a designated area where ships can conduct ballast water exchange.

[16] As part of the Global Ballast Water Management Programme (GloBallast) in Africa, an initiative of the International Maritime Organization and the United Nations Development Programme (UNDP). See http://www.bcb.uwc.ac.za/pssa/articles/features/no53.htm (visited 12 May 2007).
[17] Art. 4.
[18] Art. 5.
[19] Art. 9.

Furthermore, during this exchange process, all sediments are to be removed from the ballast water space.[20]

A party to the Convention may, either individually or jointly with other parties, impose on the ships additional measures to prevent, reduce or eliminate the transfer of harmful aquatic organisms and pathogens through ballast water.[21] In such circumstances, the party or parties should prior to establishing these measures notify any nearby states that may be affected by these measures. Furthermore, the Guidelines developed by the Organisation must be taken into account and these measures must be communicated to the Organisation at lease six months in advance unless in instances of emergency.[22] Moreover, these additional measures may not compromise the safety and security of the ship.

In areas known for poor tidal flushing, areas close to the sewage outfall or those known to contain outbreaks or infestations of harmful pathogen, a party should make an attempt to notify mariners within its jurisdiction of the precise location of the area, so as to reduce the likelihood of the uptake of harmful pathogens. Such notification will also extend to the Organisation and other ships that may need to take ballast water from the area. This notice will remain in effect until stated otherwise by the party.

5.2 Monitoring mechanisms

These must be undertaken through the joint or individual efforts of member states in promoting the principles of Ballast water management in their territorial waters. Management will be through the observation, measurement, sampling and analysis of the effectiveness, and adverse impacts of, any technology or methodology used to deal with organisms and pathogens transferred through ships' ballast water.

Wherever possible, ships are encouraged to conduct ballast water exchange 200 nautical miles from their port of destination in order to minimise the risks of the introduction of invasive marine species. It is generally hoped that the oceanic plankton which may be picked up in the high seas will be less likely to survive in the environment of the port, thereby ensuring the safety of the resident marine species. Alternatively, Parties to the Convention should have on-shore ballast reception facilities where the ballast water will be treated before being released into the ocean.

In terms of the management and control requirements for ships, each ship is required to have on board, and implement, a ballast water management plan approved by the Administrator and in line with the IMO Guideline. This plan shall be specific to each ship and contain, at the very least, detailed safety procedures; and

[20] Regulations B-5 of the Annex of the Convention.
[21] Regulation C-1. 1 of the Annex of the Convention.
[22] *Ibid*. 3.

identify the crew associated with the ballast water management. Procedures for the disposal of sediments at sea and on shore must also be detailed along with reporting requirements for ships as provided in the Convention. Ballast water management is also regulated in line with the ballast water capacity and date of construction of a ship. For example ships constructed before 2009 with the ballast water capacity of between 1500 and 5000 cubic metres must conduct ballast water management that at least meets the ballast water exchange standards[23] until 2014 after which time it shall at least meet the standard.

5.3 Requirements for and feasibility of the Convention to come into force

The Convention will come into force twelve months after ratification by no less than thirty states; these states must, however, constitute at least 35% of the gross tonnage of the world's merchant shipping. Like any other Convention, its entry into force will only be achieved once more states embrace and bind themselves to their respective roles in the preservation of marine life.

Firstly, the Convention encourages each party to develop national policies, strategies or programmes for Ballast water Management in its ports and water in order to promote the attainment of the Convention's objectives.[24] While this would be pivotal in the control of harmful aquatic organisms, the main hurdle would be the cost of the technology required to develop these strategies. Focus is often on other matters and, in the case of South Africa, as clearly articulated by Professor Griffiths, a biologist at the University of Cape Town:

> 'The authorities do not have an eradication program in place pending this or any other invasion, it is I guess, an unfortunate reality that in a country in which 20% of the population are HIV positive, 40% are unemployed, and 50% lack electricity, invasive marine species are not considered a priority issue.'[25]

Secondly, there is also the expectation that all coastal states will provide facilities for the processing of ballast water, so as to ensure that pollution is minimised. Little thought appears to have been given to the financial implications of providing these facilities; as well as of providing the qualified individuals who will be needed to monitor compliance with the regulations.

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[23] Regulation B-4 of the Annex of the Convention provides that this basic de-ballasting standard is that de-ballasting occurs 200 nautical miles from the nearest land and in water at least 200 metres in depth. And in cases where a ship is unable to conduct ballast water exchange in accordance with the former requirement, shall ballast water exchange shall be conducted as far from the nearest land as possible and in all cases at least 50 nautical miles from the nearest land and in water at least 200 metres in depth.

[24] Art. 4(2).

[25] Charles Griffiths, 'Invasive species: Their threat to MPAs and how Practitioners are responding. Monitoring an invasion, Saldanha South Africa' (2005), available at <http://www.amlc-carib.org/en/newsletters/2005_spring/general_interest/invasive_species_their_threat_to_mpas_and_how_practitioners_are_responding/index.html?&L=0> (visited 15 April 2007).

Thirdly, there is an optimistic assumption that ports will make arrangements to ensure compliance with states' legislation, as well as with the terms of the Convention; and, at the same time, enforce systems for the prosecution of offenders. This assumes also that all states will have the regulations to be complied with, a policing mechanism to ensure compliance, and competent authorities to prosecute and mete out deterring punishments. Furthermore, all of the recommendations contained in the Convention remain grandiose ideals, in the absence of policing mechanisms to enforce them, and to guarantee accountability.

In respect of violations, the recommendations made by the Convention are somewhat vague; the administration (which in this case refers to the government of the state under whose authority is operating) is to investigate allegations of violations; and the onus is on the complainant to prove violations. However, with the large numbers of ships that dock at busy ports daily, the issue becomes how to single out the exact ship that is the source of the problem. Furthermore, according to Article 8(2), sanctions to be imposed on the violating party will be determined by the laws of the aggrieved state; many developing nations are, however, lagging behind in terms of their legislation pertaining to the environment and, as such, their law might be insufficient to remedy violations adequately. What then might be their recourse in such an instance? Moreover, the Convention lacks scales for quantifying damage caused to marine life.

6. Conclusion

Concern about the problems of ballast water transfers stems from environmental, economic and health perspectives. Ballast water may play a role in the spread of epidemic disease bacteria, as once a harmful pathogen is introduced it is usually very difficult or impossible to prevent wide-spread harm. Changes in ecosystems can cause severe socio-economic problems as well.

Although there are a few areas that need to be ironed out in terms of the Convention, the Convention is clear on the three-dimensional approach which has to be taken to address the problem; meaning that action must be taken internationally, regionally and nationally. This is an important step forward in the development of the protection of biodiversity in international law. The importance of this Convention lies essentially in that it seeks to address a problem faced by many nations as a result of the introduction of invasive species which, once released into new environments, might wreak havoc and destroy natural habitats. This is a problem which has historically been under-acknowledged. If awareness of the seriousness of the problem is raised, then at least a beginning has been made.

Marine biodiversity conservation with a special focus on the work carried out under the Helsinki Convention

Minna Pyhälä[1]

1. Introduction: why marine biodiversity should be conserved

1.1 The marine ecosystem

Oceans make life on Earth possible. They cover nearly 71% of the Earth's surface and, with an average depth of almost 4,000 meters, provide more than 90% of the habitable area for life on Earth; thus harbouring most of the water and biological diversity on the planet.[2] Oceans provide many essential services, with substantial socio-economic benefits that are often taken for granted. Recent studies indicate that oceans are the very fabric of life: they provide nearly half of the oxygen in the atmosphere, govern our climate and weather, regulate temperature, drive planetary chemistry, and absorb substantial amounts of carbon dioxide.[3]

A healthy marine environment is essential to supporting life on Earth. Species and functional diversity are important for maintaining healthy ecosystems. Degraded habitats and loss of species lead to reduced ecosystem function whereas low genetic diversity reduces the ability of species and ecosystems to adapt to changing conditions. The diversity of species within marine ecosystems, and that of genes

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[2] UNEP. 'Critical Ocean Issues: Ecosystems and Biodiversity in Deep Waters and High Seas.' *UNEP Regional Seas Reports and Studies* No. 177, UNEP/IUCN, Switzerland 2006, available at <http://www.unep.org/pdf/EcosystemBiodiversity_DeepWaters_20060616.pdf> (visited 12 March 2007), at 10.

[3] For more information about the importance of the world's oceans, see <http://www.panda.org/about_wwf/what_we_do/marine/blue_planet/open_ocean/ocean_importance/index.cfm> (visited 12 March 2007).

within populations, is, therefore, an important stabilizing force in the face of both natural environmental variability, as well as human induced stresses such as climate change.

Not only is a diverse and well functioning marine ecosystem necessary for maintaining so-called ecosystem goods and services; but recreational, cultural and aesthetic values of clean bathing waters and the natural beauty of landscapes and diverse nature are all important to humans and form a part of our joint natural heritage. In addition, it is important to maintain diverse ecosystems for the sake of gaining more knowledge about them and their functions, as understanding ecosystem functions is a prerequisite for good management of the marine environment.

1.2 The value of marine biodiversity

The value of marine ecosystem goods and services, in addition to the traditional human uses of the ocean such as transportation, resource extraction and waste disposal, has been estimated at a minimum of US$20,900,000,000,000 (US$20.9 trillion) a year. This sum is approximately 63% of the total estimated value of all systems on Earth. Although this figure may be a preliminary 'guesstimate,' based on limited information, its magnitude underscores the importance of services provided by nature to the planet and humanity, and the risk of underestimating ecosystem services whose values cannot be easily quantified.[4]

1.3 Threats to marine biodiversity

The open sea was once regarded as a vast and featureless water body containing inexhaustible riches and bounty. Several open ocean species, such as many cetaceans, seabirds, sharks and tunas, are widely distributed and occur in all or most parts of the ocean. Thus, it was for a long time assumed that humans could not diminish their numbers. This, as well as the 'freedom of the seas' doctrine - a principle put forth in the seventeenth century, essentially limiting national rights and jurisdiction over the oceans to a narrow belt of sea surrounding a nation's coastline - led to the over-exploitation of many marine resources and the use of the ocean as a common dumping ground for wastes generated on land, such as industrial waste, sewage sludge, dredged materials and radioactive wastes.

Fishing provides an essential source of food and income for numerous people in many nations. Catch rates are declining and almost 75% of the world's fish stocks are already fished up to or beyond their sustainable limit.[5] We have learned that

[4] UNEP, 'Critical Ocean Issues: Ecosystems and Biodiversity in Deep Waters and High Seas.' See *supra* note 2 at 19.

[5] FAO, 'The State of World Fisheries and Aquaculture 2004' (FAO 2004), available at <http://www.fao.org/DOCREP/007/y5600e/y5600e00.htm> (visited 12 March 2007).

the oceans are not the infinite and inexhaustible source of food that we had once imagined. Nevertheless, as fish stocks are depleted in national waters, fishers are moving out to the high seas and deep oceans in search of new and less controlled or regulated stocks. Likewise, mineral, gas and oil exploration, as well as bioprospecting, are moving to deeper waters as technological developments allow for new ways to tap into these resources.

Pollution from land-based activities is contaminating even the deepest ocean trenches with hazardous substances such as heavy metal and pesticide residues. These originate from industries and agriculture as well as households, and reach the sea either by direct disposal into the sea or through indirect discharges that reach the ocean via rivers or the atmosphere. Some pollutants can be transported over long distances by winds and currents and to great depths by down-welling water masses and sinking organic matter. Persistent organic pollutants (POPs) have been found to travel through the food chain, with high concentrations accumulating in top predators, affecting their immunological and endocrine systems.[6]

Land-based activities also release significant amounts of nutrients which find their way into the sea through the same pathways as hazardous substances. Excessive nutrients loads in the marine environment are causing eutrophication; which, in turn, is altering the structures of marine communities and resulting in oxygen depleted and acidified sea beds.

These devastating effects on the marine environment are the cumulative effects of a wide range of human activities. Scientists fear that a decline in species numbers and diversity is altering the composition of entire ecological communities and food webs; thus making them less resilient and more vulnerable to climate change and other environmental shifts caused by disease, alien invasive species and the cascading effects of overexploitation. In recognizing the value of a healthy and balanced marine environment and the threats that are posed to it by human activities, it is clear that the conservation and integrated management of the marine environment are crucial to sustainable development and the future of humankind.

2. An evolving international legal regime for protecting the marine environment

2.1 Introduction

The 'freedom of the seas' doctrine prevailed well into the twentieth century; however, by mid-century, there was an increasing motivation to extend national claims over offshore resources, examples being the 1945 Truman Proclamation on the con-

[6] <http://www.helcom.fi/environment2/hazsubs/en_GB/inputs/> (visited 12 March 2007).

tinental shelf,[7] the 1947 Presidential declarations by Chile[8] and Peru[9] which established maritime zones of 200 miles. There was growing concern over the toll taken on coastal fish stocks by long-distance fishing fleets, and also over the threat of pollution and wastes from transport ships and oil tankers carrying noxious cargoes across the globe. The hazard of pollution was ever present, threatening coastal resorts and all forms of ocean life. The navies of the maritime powers were competing to maintain a presence across the globe on the surface waters and even under the sea. These issues were all threatening to transform the oceans into another arena for conflict and instability.

2.2 Global agreements for protecting the marine environment

In late 1967, at a United Nations General Assembly Meeting, there was a call for 'an effective international regime over the seabed and the ocean floor beyond a clearly defined national jurisdiction'.[10] This urging came at a time when many recognized the need for updating the 'freedom of the seas' doctrine to take into account the technological changes that had altered man's relationship to the oceans. It set in motion a process that spanned 15 years and saw the creation of the United Nations Seabed Committee,[11] the signing of a treaty banning nuclear weapons on the seabed,[12] the adoption of the declaration by the General Assembly that all resources of the seabed beyond the limits of national jurisdiction are the common heritage of mankind[13] and the convening of the Stockholm Conference on the Human Envi-

[7] Policy of the United States with Respect to the Natural Resources of the Subsoil and Sea-Bed of the Continental Shelf, Proclamation No. 2667, 10 Fed. Reg. 12303; XIII Bulletin, Dept. of State, No. 327, 30 September 1945, at 485.

[8] Presidential Declaration Concerning Continental Shelf of 23 June 1947, *El Mercurio*, Santiago de Chile, 29 June 1947.

[9] Presidential Decree No. 781 of 1 August 1947, *El Peruano: Diario Oficial.* Vol. 107, No. 1983, 11 August 1947.

[10] Speech by Malta's Ambassador to the United Nations, Mr. Arvid Pardo, 22nd United Nations General Assembly, First Committee 1516th Meeting. 1 November 1967, available at <http://www.un.org/depts/los/convention_agreements/texts/pardo_ga1967.pdf> (visited 12 March 2007), at 2.

[11] Examination of the question of the reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction, and the use of their resources in the interests of mankind, UN GA Res. 2340 (XXII), 18 December 1967. The General Assembly set up an 'Ad Hoc Committee to Study the Peaceful Uses of the Sea-Bed and the Ocean Floor beyond the Limits of National Jurisdiction'. This work led to the creation of the International Seabed Authority in November 1994.

[12] Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof (Seabed Arms Control Treaty), opened for signature in Washington, London, and Moscow on 11 February 1971, in force 18 May 1972, 955 *United Nations Treaty Series* 115, available at <http://www.state.gov/www/global/arms/treaties/seabed1.html> (visited 12 March 2007).

[13] Reservation exclusively for peaceful purposes of the sea-bed and the ocean floor, and the subsoil thereof, underlying the high seas beyond the limits of present national jurisdiction and use of their resources in the interests of mankind, and convening of a conference on the law of the sea. UN GA Res. 2750 (XXV), 17 December 1970, at 25.

ronment.[14] What started as an exercise to regulate the seabed turned into a global diplomatic effort to regulate and write rules for all ocean areas, all uses of the seas and all of their resources.[15]

These were some of the factors that led to the convening of the Third United Nations Conference on the Law of the Sea where it was decided that a comprehensive treaty for the oceans should be written. It ended nine years later with the adoption, in 1982, of a constitution for the seas - the United Nations Convention on the Law of the Sea (UNCLOS)[16] – which establishes the basic jurisdictional zones and fundamental rights and duties of states throughout the ocean realm.

Under UNCLOS, coastal states have exclusive rights to the resources of their exclusive economic zones (EEZs). At the same time, all states have the right and freedom to access the resources of the 'high seas'; as well as the duty to conserve marine living resources and to protect and preserve the marine environment, wherever located. In areas beyond national jurisdiction, both in the high seas and the seabed area, the provisions of UNCLOS have been elaborated through a variety of legal agreements. The Convention, in addition to laying down the fundamental obligation of all states to protect and preserve the marine environment;[17] also urges all states to cooperate on a global and regional basis in formulating rules and standards and otherwise take measures for the same purpose.

Prior to the adoption of UNCLOS, various conventions addressing the problem of pollution at sea were adopted under other fora. In 1954, the International Convention for the Prevention of Pollution of the Sea by Oil[18] was adopted. The

[14] The United Nations Conference on the Human Environment, Stockholm, Sweden, 5-16 June 1972. It was this Conference which resolved to establish the United Nations Environment Programme, UNEP. <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=> (visited 12 March 2007).

[15] The United Nations Convention on the Law of the Sea (A historical perspective), <http://www.un.org/depts/los/convention_agreements/convention_historical_perspective.htm> (visited 12 March 2007).

[16] United Nations Convention on the Law of the Sea (UNCLOS), Montego Bay, 10 December 1982, in force 16 November 1994, 21 *International Legal Materials* (1982) 1261, <http://www.un.org/Depts/los/index.htm> (visited 12 March 2007).

[17] Coastal states are empowered to enforce their national standards and anti-pollution measures within their territorial sea. Every coastal State is granted jurisdiction for the protection and preservation of the marine environment of its EEZ. Such jurisdiction allows coastal states to control, prevent and reduce marine pollution from dumping, land-based sources or seabed activities subject to national jurisdiction, or from or through the atmosphere. With regard to marine pollution from foreign vessels, coastal states can exercise jurisdiction only for the enforcement of laws and regulations adopted in accordance with the Convention or for 'generally accepted international rules and standards'. Such rules and standards, many of which are already in place, are adopted through the competent international organization, namely the International Maritime Organization (IMO).
See <http://www.un.org/Depts/los/convention_agreements/convention_historical_perspective.htm> (visited 12 March 2007).

[18] International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL), London, 12 May 1954, in force 26 July 1958, 327 *United Nations Treaty Series* 3, <http://www.imo.org/>.

International Maritime Organization (IMO) was established in 1958;[19] and several conventions were adopted under its umbrella, including the 1972 signings of the International Convention for the Prevention of Pollution from Ships and Aircraft[20] and the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter,[21] and the signing of the International Convention for the Prevention of Pollution from Ships in 1973.[22] The importance of addressing pollution from land-based sources was also recognized in the early 1970s; with the adoption of the Convention for the Prevention of Marine Pollution from Land-Based Sources in 1974.[23]

2.3 Regional measures

In response to the United Nations Conference on the Human Environment, held in Stockholm in 1972, a Regional Seas Programme was launched by the United Nations Environment Programme (UNEP).[24] This programme was set off by the creation of an Action Plan for the Mediterranean Sea and the adoption of the Barcelona Convention in 1976.[25] The UNEP Regional Seas Programme now covers 18 regions of the world, with more than 140 countries participating in 13 Regional Seas Programmes established under the auspices of UNEP. [26]

[19] In 1948 an international conference in Geneva adopted a convention formally establishing the IMO (the original name was the Inter-Governmental Maritime Consultative Organization, or IMCO, and the name was changed to IMO in 1982). The IMO Convention entered into force in 1958. <http://www.imo.org/> (visited 12 March 2007).

[20] Convention for the Prevention of Marine Pollution by Dumping from Ships and Aircraft (Oslo Convention), Oslo, 15 February 1972, in force 7 April 1974, 11 *International Legal Materials* (1972) 262. A Ministerial level meeting of the Oslo and Paris Commissions, held in Paris in September 1992, decided to merge the existing Oslo and Paris Conventions (see *infra* note 24). The merging resulted in the adoption of the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR Convention), Paris, opened for signature 22 September 1992, in force 25 March 1998, 32 *International Legal Materials* (1993) 1069, <http://www.ospar.org/eng/html/background.htm> (visited 12 March 2007).

[21] Convention on the Prevention of Marine Pollution by Dumping of Wastes and other Matter (London Convention), London, 13 November 1972, in force 30 August 1975, 11 *International Legal Materials* (1972) 1294, <http://www.londonconvention.org/>.

[22] International Convention for the Prevention of Pollution from Ships, 1973, first signed 2 November 1973, as modified by the Protocol of 1978 relating thereto (MARPOL 73/78), adopted 17 February 1978. The combined instrument entered into force on 2 October 1983, 12 *International Legal Materials* (1973) 1319, <http://www.imo.org>.

[23] Convention for the Prevention of Marine Pollution from Land-Based Sources (Paris Convention) was signed in Paris on 4 June 1974 and entered into force 6 May 1978, 13 *International Legal Materials* (1974) 352. See *supra* note 20.

[24] UNEP Regional Sea Programme, launched in 1974. The work of the Regional Seas programmes is coordinated by UNEP's Regional Seas Branch based at the Nairobi Headquarters of UNEP. <http://www.unep.org/regionalseas/About/default.asp> (visited 12 March 2007).

[25] Convention for the Protection of the Mediterranean Sea against Pollution, Barcelona, 16 February 1976, in force 12 February 1978, 1102 *United Nations Treaty Series* 27. The Convention was revised and renamed the Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean (Barcelona Convention), Barcelona, 10 June 1995, in force 9 July 2004, <http://www.unep.ch/regionalseas/regions/med/t_barcel.htm> (visited 12 March 2007).

[26] Regional Seas Programmes exist for the Black Sea, Wider Caribbean, East Africa, South East Asia, ROPME Sea Area, Mediterranean, North-East Pacific, North-West Pacific, Red Sea and Gulf of Aden, South Asia, South-East Pacific, Pacific, and West and Central Africa. For more information, see *supra* note 23.

The Regional Seas Programme aims to address the accelerating degradation of the world's oceans and coastal areas through the sustainable management and use of the marine and coastal environment. It has accomplished this by stimulating the creation of regional programmes prescribing sound environmental management to be coordinated and implemented by countries sharing a common body of water. All of these programmes reflect a similar approach, yet each has been tailored by its own governments and institutions to suit their particular environmental challenges. Parallel to the UNEP Regional Seas Programme, five independent regional conventions for the protection of the marine environment have been set up,[27] including the Convention for the Protection of the Marine Environment of the Baltic Sea Area,[28] which will be presented in more detail in this article.

2.4 Towards an ecosystem approach

With the passage of time, United Nations involvement with the law of the sea has expanded as awareness has grown that not only ocean problems but global problems as a whole are interrelated. The 1992 United Nations Conference on Environment and Development (UNCED) held in Rio de Janeiro,[29] placed a great deal of emphasis on the protection and preservation of the oceans' environment in harmony with the rational use and development of their living resources. This view was embraced in the concept of 'sustainable development' which was embodied in Agenda 21, the 'global blueprint for action' adopted at the Conference.[30] A key component to the implementation of Agenda 21 was the adoption of the Convention on Biological Diversity (CBD).[31] This agreement between the vast majority of the world's governments[32] sets out commitments for maintaining the world's ecological underpinnings as we go about the business of economic development. The Convention establishes three main goals: the conservation of biological diversity, the sustainable use of its components, and the fair and equitable sharing of the benefits from the use of genetic resources.[33]

[27] Five partner programmes for the Antarctic, Arctic, Baltic Sea, Caspian Sea and North-East Atlantic regions are members of the Regional Seas family.

[28] Convention for the Protection of the Marine Environment of the Baltic Sea Area (Helsinki Convention), Helsinki, 9 April 1992, in force 17 January 2000, 13 *International Legal Materials* (1974) 546, <http://www.helcom.fi>.

[29] United Nations Conference on Environment and Development (UNCED), Rio de Janeiro, 3-14 June 1992, <http://www.un.org/esa/sustdev/documents/docs_unced.htm> (visited 12 March 2007).

[30] Agenda 21: Earth Summit - The United Nations Programme of Action from Rio, available at <http://www.un.org/esa/sustdev/documents/agenda21/index.htm> (visited 12 March 2007).

[31] Convention on Biological Diversity (CBD), Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org> (visited 12 March 2007).

[32] At the Rio Earth Summit, 150 world leaders signed the CBD. As of 12 March 2007, 168 countries have signed the Convention and 190 are parties to the Convention. <http://www.biodiv.org/world/parties.asp> (visited 12 March 2007).

[33] Article 1 of the CBD.

The Conference of the Parties (COP) of the CBD identified marine and coastal biological diversity as an early priority. At its second meeting, the COP released a Ministerial Statement on the Implementation of the Convention on Biological Diversity which referred to the new global consensus on the importance of marine and coastal biological diversity as the Jakarta Mandate on Marine and Coastal Biological Diversity.[34] A work programme on marine and coastal biodiversity has since been developed and adopted.[35]

The necessity to combat the degradation and depletion of fish stocks, both in the zones under national jurisdiction and in the high seas, as well as its causes, such as over-fishing and excess fishing capacity, by-catch and discards, has been one of the recurrent topics in the process of implementation of Agenda 21. As a result, an intergovernmental conference under United Nations auspices was convened with a view to resolving the old conflict between coastal states and distant-water fishing states over straddling and highly migratory fish stocks.[36] This Conference adopted the 1995 Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks[37] which introduced a number of innovative measures, particularly in the area of environmental and resource protection, obliging states to adopt a precautionary approach to fisheries exploitation and giving expanded powers to port states to enforce proper management of fisheries resources. [38]

As a further means to conserve and manage ocean and fisheries resources, regionally as well as globally, the 2002 World Summit on Sustainable Development (WSSD)[39] adopted the target to establish representative networks of marine protected areas (MPAs) by 2012[40] as well as the target to restore depleted fish stocks by 2015.[41] In addition, world leaders at WSSD committed to reduce the rate of biodiversity loss by 2010[42] and encourage the application of the ecosystem approach by 2010.[43] In order

[34] The Jakarta Ministerial Statement on the Implementation of the Convention on Biological Diversity, UN Doc. UNEP/CBD/COP/2/19 (1995), Annex I, Appendix 1, at 40-41.

[35] Conservation and sustainable use of marine and coastal biological diversity, including a programme of work, CBD COP Decision IV/5, UN Doc. UNEP/CBD/COP/4/27 (1998), Annex, at 84-96.

[36] United Nations Conference on Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, <http://www.un.org/Depts/los/fish_stocks_conference/fish_stocks_conference.htm> (visited 12 March 2007.)

[37] Agreement for the Implementation of the Provisions of the UN Convention on the Law of the Sea of 10 December 1982 Relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York, 4 August 1995, in force 11 December 2001, 34 *International Legal Materials* (1995) 1542, <http://www.un.org/Depts/los/convention_agreements/ convention_overview_fish_stocks.htm> (visited 12 March 2007).

[38] *Ibid*. Art. 5, 18 and 19.

[39] World Summit on Sustainable Development, Johannesburg, 26 August - 4 September 2002, <http://www.un.org/jsummit/html/basic_info/basicinfo.html> (visited 12 March 2007).

[40] Plan of Implementation of the World Summit on Sustainable Development, 4 September 2002, available <http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm> (visited 12 March 2007), at para. 32(c).

[41] *Ibid*. para. 31(a).

[42] *Ibid*. para. 44.

[43] *Ibid*. para. 30(d).

to reach these aims, leaders agreed to develop and facilitate the ecosystem approach, to eliminate destructive fishing practices, to improve scientific understanding and assessment of marine and coastal ecosystems to assist sound decision-making, and to 'maintain the productivity and biodiversity of important marine and coastal areas both within and beyond national jurisdiction'.[44]

The WSSD goal for MPAs was supported by the CBD, which set a goal that calls for the establishment and maintenance of marine and coastal areas that are effectively managed, ecologically based, and contribute to a global network that builds upon national and regional systems by 2012.[45] The 2004 CBD COP further requested the Ad hoc Open-ended Working Group on Protected Areas to explore options for cooperation to establish MPAs in areas beyond national jurisdiction.[46]

The CBD is based on the principle that conservation of biological diversity is a 'common concern of humankind'.[47] In the case of marine biodiversity conservation, a significant portion of biodiversity lies beyond national jurisdiction, such as in the high sea areas. In these areas, the CBD's provisions do not apply to the components of biodiversity per se (as they do within national jurisdiction); however, they do apply to countries individually with regard to national activities that may have adverse impacts on biodiversity wherever it is located. In areas beyond national jurisdiction, the 136 countries that have ratified, or acceded to, the CBD[48] have two strict obligations: firstly, parties are to ensure that activities within their jurisdiction or control do not damage the environment of other states or areas beyond the limits of national jurisdiction;[49] and, secondly, parties are to cooperate with respect to the conservation and sustainable use of biological diversity in areas beyond national jurisdiction, either directly or through the appropriate international organization.[50] Parties to the CBD are to implement these obligations consistently with the rights and requirements of states under UNCLOS.[51]

2.5 Inter-organizational cooperation

Since 2002, discussions on vulnerable and threatened marine ecosystems and biodiversity in areas beyond national jurisdiction have been held, inter alia, at the UN, by parties to the CBD as well as under the framework of the Food and Agriculture

[44] *Ibid*. para. 32(a).
[45] Protected areas (Articles 8(a) to (e)), CBD COP Decision VII/28, UN Doc. UNEP/CBD/COP/7/21 (2004), at 345.
[46] Marine and coastal biological diversity: conservation and sustainable use of deep seabed genetic resources beyond the limits of national jurisdiction, CBD COP Decision VIII/21, UN Doc. UNEP/CBD/COP/8/31 (2006), at 276-277.
[47] Preamble of the CBD.
[48] As of 19 December 2006; CBD Quarterly Report, UN Doc. UNEP/CBD/QR/35 October to December 2006, available at <http://www.biodiv.org/secretariat/quarterly.shtml> (visited 12 March 2007).
[49] Article 3 of the CBD.
[50] Article 5 of the CBD.
[51] Article 22(2) of the CBD.

Organization (FAO). As a result, the UN General Assembly, the CBD parties and FAO members have adopted a series of resolutions and decisions on the matter calling for urgent action. In 2003, the UN General Assembly resolutions on oceans and the law of the sea invited the relevant global and regional bodies, in accordance with their mandates to:

> '…investigate urgently how better to address, on a scientific basis, including the application of precaution, the threats and risks to vulnerable and threatened marine ecosystems and biodiversity in areas beyond national jurisdiction, how existing treaties and other relevant instruments could be used in this process, consistent with international law, in particular with the Convention [UNCLOS] and with the principles of an integrated ecosystem based approach to management, including the identification of those marine ecosystem types that warrant priority attention; and to explore a range of potential approaches and tools for their protection and management…'[52]

At the 2006 CBD COP, parties urged increased cooperation with UNCLOS and other relevant international organizations; in order to, further analyze and explore options for preventing and mitigating the impacts of some activities on selected seabed habitats.[53] Both UNCLOS and the CBD envisage the development of additional agreements, measures or cooperative mechanisms to implement the obligations under these conventions to protect and conserve the marine environment and biodiversity.

2.6 Other relevant agreements

Marine biodiversity conservation is also indirectly supported by a range of other conventions, such as the 1979 Convention on Migratory Species,[54] the 1973 Convention on Trade in Endangered Species (CITES),[55] as well as, various other regional

[52] Oceans and the law of the sea, UN GA Res. 58/240 (23 December 2003), para. 52 at 10.

[53] Marine and coastal biological diversity, CBD COP Decision VII/5, UN Doc. UNEP/CBD/COP/7/21 (2004), para. 54 at 140.

[54] Convention on Migratory Species of Wild Animals (Bonn Convention), Bonn, 23 June 1979, in force 1 November 1983, 19 *International Legal Materials* (1989) 15, <http://www.cms.int/>. The Convention on Migratory Species requires 'Range states' to protect listed migratory species including sea turtles, sea birds and small cetaceans, as well as their habitat. This obligation applies also to open ocean hotspots that provide important habitat for these species. A 'Range State' includes any state whose authorized or 'flagged' vessels are engaged in taking a specific migratory species, also in areas beyond national jurisdiction. Several regional agreements and memoranda of understanding have already been developed to promote cooperation in protecting small cetaceans, albatrosses and petrels, and sea turtles. These encourage Range states to protect migratory corridors, breeding and feeding grounds and other essential habitats.

[55] Convention on Trade in Endangered Species (CITES), Washington, 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, <http://www.cites.org/>. CITES provides an important mechanism for ensuring and facilitating sustainable utilization and trade in wild species of plants and animals, including marine species. CITES establishes the international legal framework for the prevention of trade in endangered species (Appendix I) and for regulation of trade in species that might become endangered without such regulation (Appendix II). With respect to high seas species 'introduced from the sea', CITES provides a mechanism for international cooperation in trade regulation, enabling consumer countries to support management efforts of producer countries.

and/or species specific conventions. Other global agreements relevant for the conservation and sustainable use of biodiversity in areas beyond national jurisdiction include those which address shipping activities, fisheries activities, the transport and dumping of land-based wastes at sea, long-range air pollution and climate change, as well as land-based activities that may degrade the coastal and marine environment; e.g. the London Convention, MARPOL 73/78, Agreement on Straddling Fish Stocks and Highly Migratory Fish Stocks, Convention on Long-range Transboundary Air Pollution,[56] UN Framework Convention on Climate Change,[57] etc.

3. Protecting the Baltic Sea marine environment – the work of the Helsinki Convention

3.1 Introduction

The Convention for the Protection of the Marine Environment of the Baltic Sea Area[58] (Helsinki Convention) was signed in 1974 by the Ministers of Environment from the (then) seven Baltic Sea states. The Convention was developed in an era of increased environmental awareness and as a reaction to concerns about the worsening state of the Baltic Sea marine environment. The unique and sensitive nature of the Baltic Sea, coupled with the fact that it is a valuable resource for the riparian countries, resulted in the Baltic coastal states acknowledging that the sustainability and well-being of the Baltic Sea depends on coordinated efforts and joint regional environmental standards. This initiative stemmed from the 1972 United Nations Conference on the Human Environment which opted for regional cooperation in areas such as the Baltic, where for geographical and ecological reasons regional cooperation could be carried out for a natural entity.

A revised Helsinki Convention was adopted in 1992[59] in order to take into account the further strengthening of environmental awareness which had paved the way for international environmental law developments; as well as, for developments in the region's political environment.[60] The 1992 Convention was signed by the Ministers of Environment of the nine Baltic Coastal states as well as by the (then) Czech and Slovak Federal Republic, Norway and the European Economic Community and entered into force in 2000.

[56] Convention on Long-range Transboundary Air Pollution, Geneva, 13 November 1979, in force 16 March 1983, 18 *International Legal Materials* (1979) 1442, <http://www.unece.org/env/lrtap/>.

[57] United Nations Framework Convention on Climate Change (UNFCCC), New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, <http://unfccc.int/>.

[58] Convention for the Protection of the Marine Environment of the Baltic Sea Area, Helsinki, 22 March 1974, in force 3 May 1980, 13 *International Legal Materials* (1974) 546, <http://www.helcom.fi>.

[59] The revised 1992 Helsinki Convention (see *supra* note 28) included, amongst other things, the expansion of the 'Convention Area' to cover also inland waters within the catchment area of the Baltic Sea, rather than only the marine areas of the Baltic Sea. In addition to expanding the mandate of HELCOM, the revised Convention included new environmental principles and took on board the issues of biodiversity and nature conservation, as well as the sustainable use of the natural resources of the Baltic Sea area.

[60] With the fall of the Soviet Union, Estonia, Latvia and Lithuania became contracting parties to the Helsinki Convention.

For three decades the Helsinki Commission (HELCOM),[61] the governing body of the Helsinki Convention, has been working to protect the marine environment of the Baltic Sea. This work has been driven by the specific environmental, economic and social situation in the Baltic region and the special sensitivity of the Baltic Sea. Since the 1970s, HELCOM has had a holistic approach to the restoration and protection of the Baltic Sea marine environment, taking into account the whole ecosystem; as well as, the economic, social, recreational and cultural aspects of the people living in the riparian countries. During its more than 30 years of existence, HELCOM has cooperated closely with the scientific community to collect and disseminate environmental data, which is used to produce regular and comprehensive assessments on the pressures affecting the marine environment and their effects on the whole marine ecosystem. These assessments are the basis upon which decisions are made to take further actions to reduce the impacts of human activities on the environment.

The main role of HELCOM is to act as scientific advisor and environmental policy maker. In addition to taking regional measures imposed by other international organizations, HELCOM also supplements these by developing Recommendations[62] of its own according to the specific needs of the Baltic Sea. Furthermore, HELCOM works to ensure that commonly agreed upon environmental standards are fully implemented by all its contracting parties throughout the Baltic Sea and its catchment area.

3.2 Regional specifics: the unique nature of the Baltic Sea

The Baltic Sea is one of the largest brackish-water bodies in the world. The brackish waters of the Baltic are the result of the large freshwater input from rivers and the restricted inflow of saline water through the narrow and shallow Danish Straits. The mix of fresh and saline waters results in a permanent stratification of the water. Steep gradients in topography, climate and salinity are characteristic to the Baltic Sea. Salinity decreases from 15-25 parts per thousand in the Kattegat region to about 2-3 parts per thousand in the Bothnian Bay. The northern part of the Baltic Sea is covered by ice during the winter. Landscapes vary from mosaics of archipelagos in the northern Baltic to vast sandy shores in the southern Baltic. In addition, there are no tidal movements.

[61] The Helsinki Commission, or HELCOM, works to protect the marine environment of the Baltic Sea from all sources of pollution through intergovernmental cooperation between the countries bordering the sea - Denmark, Estonia, Finland, Germany, Latvia, Lithuania, Poland, Russia and Sweden; as well as, the European Community.

[62] HELCOM Recommendations can be characterized as soft law in that they are not legally binding as such. However, the fact that the Recommendations are adopted unanimously, and that countries are required to report on their national implementation, diminishes concerns about the lacking legal nature.

These special characteristics affect the biodiversity of the Baltic Sea. Due to the brackish water environment, there are relatively few animal and plant species compared to other aquatic ecosystems. However, there is a unique combination of marine and freshwater species adapted to the brackish conditions. Plant and animal communities in the northern Baltic have a larger proportion of freshwater species in contrast to the more marine communities found in the southern Baltic. The number of species also decreases towards the northern Baltic. Many Baltic species are genetically distinct from their marine or freshwater source populations and there are even some indications for speciation.

The naturally low number of species in the Baltic Sea lends specific importance to the well-being of populations of all native organisms. As there is very little functional redundancy[63] in the Baltic Sea ecosystem, many Baltic Sea species can be treated as keystone species.[64] The removal of just one species can, therefore, have more of an impact here than in areas with high functional redundancy. Although only one species, the sturgeon (*Acipenser sturio*), has become extinct in the Baltic Sea in recent history; there have been observed reductions in the abundance, range and distribution of several other species.

3.3 Threats to the biodiversity of the Baltic Sea

The marine and coastal ecosystems in the Baltic Sea are threatened by many human activities. The naturally low level of biodiversity and the slow water-exchange rate, caused by its semi-enclosed physical characteristic, mean that the Baltic Sea is particularly sensitive to pressures and that many problems are exacerbated. Eutrophication has reduced water quality and hazardous substances have accumulated in the biota, with consequent negative impacts on biodiversity. Some species are directly threatened by, for example, overexploitation of fisheries; and many species suffer also from the destruction of habitats.

The probability of environmental hazards being caused by severe oil spills is continually rising with increasing shipping in the Baltic Sea. In addition, intensive maritime traffic throughout the world has resulted in the introduction of many non-native species via ships' ballast water. Together with the potential negative impacts of global warming, these might play an increasingly important role in the future.

[63] Low functional redundancy implies that there are few species that share the same function in the ecosystem and thus can replace one another to some extent.

[64] Keystone species can be defined as a species that plays a large or critical role in supporting the integrity of its ecological community and whose role in maintaining ecosystem function is greater than would be predicted based on its abundance.

3.4 HELCOM actions and achievements

HELCOM's role as a bridge between science and policy-making in the Baltic region has led to the development of measures that specifically take into account the environmental conditions and sensitivity of the Baltic Sea to various human impacts; as well as the pressures which are experienced by the Baltic Sea. Thus, HELCOM's priority areas of work are based on the major environmental problems affecting the Baltic Sea, as jointly defined by Baltic scientists. These are eutrophication, hazardous substances, biodiversity and nature conservation and maritime activities. Despite HELCOM's focus being on regionally specific needs, much of the work carried out is linked to other international fora, be these at a European or a world-wide level.

Actions by HELCOM are carried out in three main ways. Baltic Sea states may take joint initiatives to raise certain issues within international organizations - the IMO[65] and, more recently, the European Union (EU) being good examples. HELCOM also works towards harmonization and, where possible and where needed, the strictest implementation of international environmental regulations in the region. Finally, HELCOM devises specific regional actions which either result in quicker actions than would be possible if acting on the global level; or which are needed to ensure that regional interests are taken into account. This is done through development of relevant measures or joint initiatives, such as projects, seminars, awareness raising campaigns etc.

Biodiversity protection and nature conservation have been addressed by HELCOM in a variety of ways. Article 15 of the 1992 Convention states that: 'Contracting Parties shall take all appropriate measures to conserve natural habitats and biological diversity and to protect ecological processes.' Furthermore, the Article emphasizes that 'measures shall be taken to ensure the sustainable use of natural resources in the Baltic Sea area.' HELCOM has adopted several Recommendations related to biodiversity conservation; including some related to the protection of specific species[66] and biotopes, the management of coastal areas,[67] and the setting up of a network of

[65] The Baltic coastal states succeeded in gaining 'special area' status for the Baltic Sea under MARPOL 73/78 Annexes I, II, and V, implying clear obligations for the Baltic coastal states to provide ships with reception facilities in ports, where they could deliver the substances that they were not allowed to discharge into the Baltic. The Baltic Sea region has thus served as a path breaking example for other regions which have also been given the 'special area' status. This also applies for the 'SO_x emission control area status' under MARPOL 73/78 Annex VI.

[66] HELCOM Recommendations adopted for the protection of specific species include: Recommendation 19/2: Protection and improvement of the wild salmon (*Salmo salar l.)* populations in the Baltic Sea area; Recommendation 17/2: Protection of harbour porpoise in the Baltic Sea area; Recommendation 9/1: Recommendation concerning protection of seals in the Baltic Sea area; and, Recommendation 21/4: Protection of heavily endangered or immediately threatened marine and coastal biotopes in the Baltic Sea area.

[67] HELCOM Recommendations adopted for the management and protection of coastal areas include: Recommendation 15/1: Protection of the coastal strip; Recommendation 16/3: Preservation of natural coastal dynamics; Recommendation 21/3: Sustainable and environmentally friendly tourism in the coastal zones of the Baltic Sea area; and Recommendation 24/10: Implementation of integrated marine and coastal management of human activities in the Baltic Sea area.

coastal and marine protected areas.[68] Indirectly, however, all of HELCOM's actions that contribute to a cleaner and healthier Baltic Sea support, inevitably, the conservation of biodiversity.

Joint efforts have resulted in positive effects, such as reductions in the pollution loads reaching the Baltic; as well as encouraging signs of improvements in the state of the environment. More specific examples include the 40% reduction in nitrogen and phosphorus discharges (from sources in the catchment area); and, likewise, the 40% decrease as regards emissions of nitrogen to the atmosphere. And, not least, the 50% reduction in discharges of 46 hazardous substances prioritized by HELCOM.[69] These reductions have resulted in decreasing concentrations of lead in living organisms.[70] A similar decline in concentrations of PCBs in the Baltic fish[71] as well as improvements in the status of populations of white-tailed eagle, cormorant, Baltic wild salmon and seals (in the northern areas of the Baltic), have been observed.[72]

As regards the significant problem of over-fishing, HELCOM has minimal mandate to address this issue in the Baltic Sea. HELCOM does, however, participate in the Baltic Sea Regional Advisory Council under the EU Common Fisheries Policy – which is the body responsible for fisheries management in the region.

A network of Baltic Sea Protected Areas (BSPAs) was established in 1994,[73] with the aim of contributing to reaching the HELCOM goal on favourable status of the Baltic Sea biodiversity.[74] The aim of the network is to protect representative samples of marine biodiversity and associated ecosystems, habitats and species, including critical sites for species reproduction and growth. In doing so, the BSPAs provide a tool for protecting and/or restoring natural landscapes and seascapes. In 1994, 62 areas were recommended for the system of BSPAs as a first step. It was also recommended that the system of BSPAs should be gradually developed as new knowledge and information becomes available. At present, work is being carried out to establish management plans for each Baltic Sea Protected Areas, in order to ensure the protection of nature and the sustainable use of natural resources.

[68] HELCOM Recommendation 15/5: System of coastal and marine Baltic Sea Protected Areas (BSPA), adopted on 10 March 1994, available at <http://www.helcom.fi/Recommendations/en_GB/rec15_5/> (visited 12 March 2007).

[69] For more details on reductions in nutrient and hazardous substances, see HELCOM Activities Overview 2006, *Baltic Sea Environment Proceedings*, No. 107, available at <http://www.helcom.fi/press_office/en_GB/activitiesreports/> (visited 12 march 2007).

[70] Anders Bignert and Elisabeth Nyberg, 'Lead concentrations in fish liver', HELCOM Indicator Fact Sheets 2006, available at <http://www.helcom.fi/environment2/ifs/en_GB/cover/> (visited 12 March 2007).

[71] Anders Bignert and Elisabeth Nyberg, 'PCB concentrations in fish muscle', HELCOM Indicator Fact Sheets 2006, available at <http://www.helcom.fi/environment2/ifs/en_GB/cover/> (visited 12 march 2007).

[72] For more information about the status of Baltic Sea biodiversity, see <http://www.helcom.fi/environment2/biodiv/en_GB/state/> (visited 12 March 2007).

[73] HELCOM Recommendation 15/5. See *supra* note 70.

[74] The favourable status of Baltic Sea biodiversity is defined by specific ecological objectives. For more information, see <http://www.helcom.fi/environment2/ecoqo/en_GB/objectives/> (visited 12 March 2007).

In 2003, HELCOM and her sister organization in the North-East Atlantic, the Convention for the Protection of the Marine Environment of the North-East Atlantic (OSPAR),[75] adopted a Joint Work Programme on Marine Protected Areas[76] to ensure that the implementation of the HELCOM/OSPAR Ministerial Declaration (signed at a Joint Ministerial Meeting in Bremen in 2003)[77] is done consistently across their maritime areas. The Declaration stated that a first set of marine protected areas be identified by 2006; followed by the identification of gaps in order to complete, by 2010, a joint network of well-managed marine protected areas that, together with the EU's NATURA 2000 network, is ecologically coherent.[78] Not only does the establishment of such a coherent network serve to reach HELCOM's own goals, but it plays a vital role in reaching the global targets of halting biodiversity loss by 2010 and setting up a global network of representative marine protected areas by 2012.

3.5 The HELCOM Baltic Sea Action Plan: a new environmental strategy

Biodiversity is at the centre of current work to develop a HELCOM Baltic Sea Action Plan.[79] In 2005, the HELCOM member states and the EU resolved to develop a Baltic Sea Action Plan, to ensure that all possible measures are taken to reduce pollution in the Baltic Sea and to repair the damage done to the marine environment. The novelty of the approach used in the Action Plan is that HELCOM is now putting the ecosystem at the centre, by defining the status of the sea as we want it to be in the future, and focusing management decisions on this goal as opposed to the more traditional approach of addressing the sources of pollution, without directly linking the measures to the status of the Baltic Sea.[80] This new strategy, which is being jointly drafted by the HELCOM member states, with input from a wide range of stakeholders; sets a target of achieving, by 2021, a good ecological status of the Baltic Sea - a sea with diverse biological components functioning in balance and supporting a wide-range of sustainable economic and social activities. The concept of this Plan has already been widely heralded as a pilot project for the European seas under the newly drafted EU Marine Strategy Directive.[81]

[75] See *supra* note 20.

[76] Joint HELCOM/OSPAR Work Programme on Marine Protected Areas, 25-26 June 2003, <http://www.helcom.fi/stc/files/BremenDocs/Joint_MPA_Work_Programme.pdf> (visited 12 March 2007).

[77] Declaration of the First Joint Ministerial Meeting of the Helsinki and OSPAR Commissions, available at <http://www.helcom.fi/stc/files/MinisterialDeclarations/HelcomOsparMinDecl2003.pdf> (visited 12 March 2007), para. 17 at 4.

[78] See *supra* note 77.

[79] For more information about the Baltic Sea Action Plan, see <http://www.helcom.fi/BSAP/en_GB/intro/> (visited 12 March 2007).

[80] Examples of the traditional HELCOM approach are the 1988 and 1998 HELCOM Ministerial decisions on a flat 50% reduction target for discharges of nutrients and hazardous substances. Declaration on the Protection of the Marine Environment of the Baltic Sea Area, 15 February 1988, (available at <http://www.helcom.fi/stc/files/MinisterialDeclarations/MinDecl1988.pdf>, visited 12 March 2007) and Communique of the Ministerial Session on 26 March 1998 (available at <http://www.helcom.fi/stc/files/MinisterialDeclarations/Communique1998.pdf>, visited 12 March 2007).

[81] For more information about the proposed EU Marine Strategy, see <http://ec.europa.eu/environment/water/marine/index_en.htm> (visited 12 March 2007).

Biodiversity not only contributes to a healthy sea which is better able to adapt to external pressures; but is also seen as a contribution to national/regional identity and providing services upon which we all depend. Moreover, biodiversity is valued by many as an expression of life itself. The many values of biodiversity are important to bear in mind when describing the future of the Baltic Sea biodiversity which we wish to have. HELCOM must recognize the complex nature of the environmental problems that are being dealt with; and address these through issues that are recognizable and understandable to the people of the Baltic coastal countries.

For this same reason HELCOM has decided to address the issue of marine protection and restoration in a holistic and policy-integrated way, by applying the ecosystem approach to the management of human activities affecting the marine environment.[82] In order to apply an ecosystem approach, there needs to be an aspiration for a healthy sea (or a sea in good ecological status), which can be described through the use of ecological objectives. Furthermore, the ecological objectives need to be measurable by indicators with targets, and implemented via targeted and cost-effective measures.

Sound scientific data is the foundation for measuring whether joint actions are achieving the desired results of a healthy Baltic Sea with a good ecological status. HELCOM has a history of providing information on the health status of the Baltic Sea area, about trends and about the effectiveness of actions taken. This has been possible because the data obtained from the nine Baltic coastal countries is comparable as a result of monitoring programmes coordinated by HELCOM. It has been recognized that there is a need to bridge the gap and strengthen interactions between the scientific community and policy-makers. HELCOM offers precisely the type of platform where such interaction can take place. Furthermore, HELCOM provides an instrument which can make use of the outcomes; namely the HELCOM Baltic Sea Action Plan.

In this process it is necessary to avoid the desire to be all encompassing, and thus excessively vague and scattered. Therefore, HELCOM has chosen to spell out its vision in understandable and measurable ecological objectives. The first set of HELCOM Ecological Objectives[83] was adopted in March 2006, together with strategic goals which cover the main environmental priorities within HELCOM's work. The four strategic goals are:

[82] A common vision of the application of the ecosystem approach to managing human activities was adopted at the Joint HELCOM/OSPAR Ministerial Meeting in 2003. See Statement on the Ecosystem Approach to the Management of Human Activities: "Towards an Ecosystem Approach to the Management of Human Activities", available at <http://www.helcom.fi/stc/files/BremenDocs/JointEcosystemApproach.pdf> (visited 12 March 2007). The ecosystem approach has also been globally recognized, inter alia, in the 1992 Rio Declaration on Environment and Development, the 1992 Convention on Biological Diversity and the 2002 World Summit on Sustainable Development. Also the draft European Marine Strategy applies an ecosystem approach.

[83] See *supra* note 74.

- a Baltic Sea unaffected by eutrophication;
- a favourable status of Baltic Sea biodiversity;
- Baltic Sea life undisturbed by hazardous substances; and
- maritime activities carried out in an environmentally friendly way.

For each goal, several ecological objectives have been chosen; describing more specifically the future of the Baltic Sea that we would like to have e.g. clear water, no excessive algal blooms and natural distribution of plants and animals. While this work is related to the application of the ecosystem approach, and has started off as a result of the problems encountered in the Baltic Sea, HELCOM has just entered a more normative, and standard-setting phase – namely by choosing indicators and developing targets for the agreed ecological objectives.

The next phase is to carry out analyses of the costs and benefits of actions – not only shedding light on the value of the environment as such, but also on the relationships between a clean environment and human health and between a clean environment and a prospering economy. Initial analyses of the cost-effectiveness of various measures have been carried out, in order to identify which sectors and areas of the Baltic should be prioritized.[84]

4. Further needs

Despite the efforts already taken, and the successes achieved; anthropogenic pressures on the marine environment continue and there is still a clear need for further actions. Even though necessary measures are identified, HELCOM's work is challenged by various factors. Firstly, it can take a long time before the effects of selected measures are seen in the environment. Secondly, the enlargement of the EU has meant that most contracting parties are prioritizing EU legislation and that many decision-making tasks have shifted from national level to EU level, such as in the case of the EU Common Agricultural Policy and the EU Common Fisheries Policy. Despite this, HELCOM still sees her role in the agricultural/fisheries fields as very important, as HELCOM holds the information on the basis of which decisions should be made. Finally, although HELCOM measures are unanimously adopted, the implementation of these agreed measures in the Baltic coastal countries is not always perfect.

In order to solve the environmental problems of the Baltic, commitment by the HELCOM contracting parties both to the development of the HELCOM Baltic Sea Action Plan and to its implementation is of crucial importance. It will require strong

[84] Outcome of Second HELCOM Stakeholder Conference, Document 2/8/Rev.1, 28th Meeting of the Helsinki Commission, 7-8 March 2007, available at <http://sea.helcom.fi/dps/docs/folders/COMMISSION%20MEETINGS%20(HELCOM)/HELCOM%2028%202007.html> (visited 12 March 2007).

political will, as well as significant financial and human resources. Additionally, it is also very important that regional environmental needs are taken into account when developing measures within other international fora, by enhancing cooperation with relevant international institutions and other regional agreements.

At a more practical level, it is necessary to shed light on much of what remains unknown below the surface. As the underwater nature of the Baltic Sea remains the least known area of our environment, more efforts should be placed on the mapping of underwater habitats. Reliable knowledge about underwater nature is needed in order to make sound decisions about the use and management of marine areas. As an example, site selection and management of marine protected areas are difficult without sufficient knowledge about 'what is found where'. Some areas of the Baltic Sea have been studied more intensively (for example, areas close to research stations), but most of the underwater nature of the Baltic is still unmapped. There are several ongoing habitat-mapping projects in the Baltic Sea countries; however, there is a need to coordinate and, as appropriate, to harmonize the methods used in the different Baltic Sea countries.

Today, roughly 6% of the Baltic Sea area is covered by Baltic Sea Protected Areas,[85] falling short of the 10% target agreed by the CBD.[86] Greater efforts are needed to activate contracting parties to designate potential areas to be added to the network. Furthermore, attention needs to be given to ensuring that suitable protective measures are applied in the areas in order to guarantee marine biodiversity conservation.

A network of coastal and marine protected areas, however, is not enough to ensure protection of the vulnerable Baltic marine biodiversity. Integrated coastal zone management must be carried out in a way that safeguards the marine and terrestrial biodiversity of marine and coastal areas, uses resources in an environmentally sustainable way, and considers social, economic and cultural aspects. Such integrated management needs to be systematically implemented throughout the region.

5. Conclusion

The international nature of a large part of the world's marine areas and the many human activities which take place there, as well as the transboundary effects of human activities in terrestrial and territorial areas, makes governance of the seas particularly challenging. It is clear that the evolution of the legal system governing common marine areas has not kept pace with scientific advances, and with man's expanding

[85] Assessment of the ecological coherence of the network of Baltic Sea Protected Areas. Document 3/13, 28th Meeting of the Helsinki Commission (7-8 March 2007) at 4. See <http://sea.helcom.fi/dps/docs/folders/COMMISSION%20MEETINGS%20(HELCOM)/HELCOM%2028%202007.html> (visited 12 March 2007).

[86] Strategic Plan: future evaluation of progress, CBD COP Decision VII/30/Annex2, target 1.1, UN Doc. UNEP/CBD/COP/7/21 (2004), at 385.

footprint on the oceans.[87] Although positive advances have been made, through countries concentrating on ecosystem-based management and creating networks of marine protected areas in their coastal waters and exclusive economic zones; areas beyond national jurisdiction (which represent approximately 64% of the ocean's surface[88]) lack the institutions, rules and enforcement mechanisms to ensure that similar considerations and precautionary approaches are applied.

Many governments have, however, recognized the need for both immediate, as well as, long-term actions for protection, conservation and sustainable use of the rich biological diversity of not only of coastal, but also of deep oceans and high seas. At global meetings, states are beginning to consider whether, and if so, what kinds of new mechanisms might be needed to ensure that precautionary and ecosystem-based management approaches are reflected in legal responsibilities, as well as how they can be effectively applied and enforced.

The increasing number of environmental agreements and conventions that have emerged during the past decades, as well as the rising interest in cooperation between different international fora concerning the management and protection of the marine environment, is encouraging. The fact that the well-being of the seas and oceans of the world has been recognized, and even given priority, in certain fora, is a sign of movement in a positive direction. In addition, regional cooperation, such as that which has taken place around the Baltic Sea under the Helsinki Convention, has proven that joint efforts are necessary, possible and do make a difference. Although marked steps forward have been made, there remains a significant need for further cooperation and implementation of measures for change. Valuing the well-being of the common marine environment, as well as setting mutual goals, are essential for managing human activities so that life as we know it in the oceans – and on Earth – can thrive in the years to come.

[87] The 'ecological footprint' is a resource management tool that measures how much land and water area a human individual or population requires to produce the resources it consumes and to absorb its wastes under prevailing technology. For more information, see <http://www.footprintnetwork.org/gfn_sub.php?content=footprint_overview> (visited 12 March 2007).

[88] Options for cooperation for the establishment of marine protected areas in marine areas beyond the limits of national jurisdiction, UN Doc.UNEP/CBD/WG-PA/1/2 (2005), at 6.

The problem that categorization of species in Meas poses for the protection of biodiversity

Ed Couzens[1]

1. Introduction

Throughout the world's (short) history of efforts to conserve wild animals, a largely unrecognized problem has been the categorization of species. Too often, species which have been short-sightedly disregarded (or, worse, actively eradicated) have in future years been recognized as having valuable or even essential roles to play in their ecosystems. This 'flaw' can be seen in numerous international treaties ranging from the London Convention on Wild Animals in Africa in 1900 to the Convention on International Trade in Endangered Species (CITES) in 1973; and even more recently. It can also be seen in the domestic laws and policies of many countries; South Africa in particular being considered, with the historical roots of its wildlife laws lying in Roman-Dutch law, but influenced by English law.

It is strongly arguable that the world ought, in international law, to be moving away from the categorization of species; and toward an approach which protects ecosystems rather than species.

2. The history of the idea of categorization; and the English experience

Before the Norman conquest of Britain in 1066, certainly from the time of the Franks and similar tribes in the seventh century, hunting on continental Europe was regarded as being the exclusive right of the king and his nobles.[2] The Franks had

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[2] C. C. Trench, *The Poacher and the Squire: A History of Poaching and Game Preservation in England* (Longmans, 1967) at 16.

been the first to introduce the '*foresta*' system – which reserved areas and animals for the exclusive use of certain classes.[3] William the Conqueror basically accepted and enforced existing English laws, but the forest laws were different – the system imposed on the Saxon English was like none they had seen before.[4] Although not strictly speaking international law as we understand the concept today, the imposition on Saxon England of the *foresta* system was necessarily an attempt to create a uniform system that would apply in different countries. In that sense, it was arguably international law.

Prior to this, the Saxons had followed the conclusions and teachings of Roman jurists who had argued that wild animals ('*ferae naturae*' or '*ferae bestiae*') were ownerless property and that they could be hunted by anyone, subject only to the laws of trespass.[5] The idea of the reservation of game had been present, since under Saxon rule no man had been allowed to hunt or kill deer reserved to the king. However, any man had had the right to kill game upon his own land.[6] This was to change under Norman rule. The previous distinction between possession by killing and 'ownership' through ownership of land, as laid out in the '*res nullius*' concept of wild animals as things which did not belong inherently to any person, was replaced under Norman rule by a severely restricted regime which provided for the right of killing.[7] Prior to the Norman Conquest, the Roman idea that a wild animal belonged to no one, but was capable of ownership by any person who killed or otherwise controlled it, was generally applicable in Saxon England. However, under Norman rule hunting certain species became a sovereign prerogative. Hunting for food became therefore poaching.[8] Vast areas of land were designated as royal forests ('*foresta regis*');[9] and, to protect these arbitrarily imposed rights, William the Conqueror imposed the death penalty for the killing of a royal deer.[10]

The Norman hierarchies were concerned, when imposing these forest laws, with sport, class privilege and the assertion of royal status. Degrees of privilege were set out by the division of forest areas into the categories of forest, chase, park and warren. The most elite category was that of the forest, in which only the king and those he delegated had access to the 'five beasts of venery' – hart and hind,[11] hare, boar and wolf. The chase and park (unenclosed and enclosed areas respectively) were reserved

[3] J. M. Mackenzie, *The Empire of Nature* (Manchester University Press, 1988) at 13.
[4] C. C. Trench, *The Poacher and the Squire, supra* note 2, at 21.
[5] *Ibid.* at 23.
[6] Jones (ed.), *The Sovereignty of the Law: Selections from Blackstone's Commentaries on the Laws of England* (MacMillan Press, 1973) at 213.
[7] J. M. Mackenzie, *The Empire of Nature, supra* note 3, at 14.
[8] P. D. Glavovic, 'An Introduction to Wildlife Law', 105 *South African Law Journal* (1988) at 524.
[9] One way to understand the importance of the change to Saxon life is to appreciate how vast were the new 'Royal forests'. In the Thirteenth Century, when royal forests were reduced, they still covered more than one-quarter of England's surface. Whole towns, villages and the county of Essex were *forests Regis*. See C. R. Young, *The Royal Forests of Medieval England* (University of Pennsylvania Press, 1979) at 5.
[10] All deer were at that time considered royal. C. C. Trench, *The Poacher and the Squire, supra* note 2, at 24.
[11] Red deer – male and female, respectively.

to the Norman nobility, who were there allowed to hunt buck and doe,[12] fox, marten and roe deer. The lowest category, the warren, contained hares, rabbits, pheasants and partridges; and could be hunted only with permission from the king.[13] The ideas of categorization and of class-reservation of animals considered worthy of hunting were thus in place at a very early date.

Under the reign of Henry II (1154-1189) the harsh penalties for breaches of the forest laws included blinding, emasculation and death (although this ultimate penalty was reserved for the third offence).[14] As the centuries went by, the general principle of forest law remained that within the royal forests the 'beasts of the forest' (red deer, fallow deer, roe deer and wild boar) could be hunted only by the king himself; and by those mandated by the king.[15] Hunting played a significant role in the lives of the monarch and the nobility, and numerous statutes followed. The special laws for the forests, which were in essence hunting reserves, served to protect them for their noble owners.

Another group of laws arose to protect animals which were regarded as being of value to communities; for instance, wild fowl were protected at moulting times, when they could not fly. Hares were not to be killed 'in time of snow' and rabbits were also encouraged and their warrens protected. Salmon, herons and doves were similarly given protection.[16] More general restrictions began to prohibit the hunting of certain classes of animals and the hunting of particular animals began to be restricted to particular classes of society; for instance, a statute of 1551 permitted only gentlemen and nobles using hawks to kill certain wild fowl.[17]

In 1671 a new era began when Parliament passed the Game Act. This Act regulated the hunting of game birds and hares and entrenched earlier class-reservation ideas by creating classes of formally qualified persons who were permitted to kill game. Nobody, if not qualified, was permitted to kill game – even on his own land. The main categories of qualified persons were financially determined: the owners of land worth £100 a year; the holders of ninety-nine year leases of land worth £150 a year; the eldest sons of esquires, knights and nobles; and their gamekeepers. Not even qualified people were permitted to sell partridges, pheasants or hares. Excluding gamekeepers, there were probably not more than 30 000 qualified persons in a population of about 5 million.[18] The effect of this Act was immediately to prevent the vast majority of the population from hunting those animals defined as game. Penalties, at this stage, were relatively mild; but this was soon to change.[19]

[12] Fallow deer – male and female, respectively.
[13] J. M. Mackenzie, *The Empire of Nature, supra* note 3, at 13.
[14] C. R. Young, *The Royal Forests, supra* note 9, at 11 and 30.
[15] C. C. Trench, *The Poacher and the Squire, supra* note 2, at 36.
[16] C. Reid, *Nature Conservation Law* (W. Green/Sweet & Maxwell, 1994) at 3.
[17] *Ibid.*
[18] C. C. Trench, *The Poacher and the Squire, supra* note 2, at 22.
[19] P. B. Munsche, *Gentlement and Poachers: The English Game Laws 1671-1831* (Cambridge University Press, 1981) at 3.

In 1723 the 'Waltham Black Act' was passed; which created categories of offences, involving mainly the hunting, wounding or stealing of deer, rabbits, hares or fish. Such offences carried the death penalty if the persons offending were found to have been armed and disguised in the commission or attempted commission of such offence.[20] The Black Act was incredibly harsh – a clause stated that if any person did 'conceal, aid, abet or succour' any other person who had been 'proclaimed' under the Act (meaning that such person had failed, after forty days, to surrender himself to the authorities), then he also could be convicted of a felony and sentenced to death.[21]

3. The South African experience

The South African legislative development in respect of wildlife is probably not markedly different to that of most countries – nor, indeed, to that on the international plane. Coming from the experience of Europe, where the penalties for poaching were so incredibly harsh, it is little wonder that early European settlers and explorers revelled in a continent with no legislation – and which provided a lavish smorgasbord of new species. To this day, the only major game preservation area with a concentration of game in any way comparable to what it once was in South Africa – the Kruger National Park – is in the corner of the country furthest from the Cape Colony, from which the colonial hunters began their rampage. There are no significant concentrations of game species near the Cape provinces.

It took some time before the colonial authorities began to realize the consequences of, and to attempt to control, the destruction of game. The first major piece of British colonial legislation in respect of game was a proclamation by Lord Charles Somerset in 1822. The preamble to this proclamation lamented that it was 'necessary to guard against the total destruction of game in this colony'.[22]

In 1822 the hippopotamus, the bontebok and the elephant were proclaimed 'royal game' – they could be hunted only with a special permit from the governor. This was the first time that such a distinction had been made in South Africa. Another first was that the idea of the 'close season' was introduced to South Africa in this proclamation.[23]

Something of the discrimination against certain animals can be seen in the fact that it was only in 1828 that, in the Cape Province, an ordinance was enacted abolish-

[20] E. P. Thompson, *Whigs and Hunters: The Origin of the Black Act* (Penguin Books, 1975) at 21-22.
[21] *Ibid.* at 175.
[22] J. M. Mackenzie, *The Empire of Nature, supra* note 4, at 202-3; and see also S. Trapido, 'Poachers, Proletarians and Gentry in the Early Twentieth Century Transvaal', African Studies Seminar Paper, African Studies Institute, University of the Witwatersrand (1984) at 2-3.
[23] J. A. Pringle, *The Conservationists and the Killers: The Story of Game Protection and the Wildlife Society of Southern Africa* (TV Bulpin & Books of Africa (Pty), 1982) at 35-36.

ing the system of paying rewards for the destruction of noxious animals.[24] Probably, though this was due in large part to the paucity of animals – even those deemed to be 'noxious'!

By the time of an 1886 Act which offered significantly increased protection to wild animals in the Cape, there was precious little game left in the vicinity of Cape Town. Hares and game birds represented about all that sportsmen could expect to find. Nevertheless, the 1886 Act gave special protection to such species as hippo, buffalo, zebra, quagga and wildebeest. However, quaggas were no more, the nearest hippos were 600 kilometres away in the Orange River, and the few remaining buffalo were hiding in the densest bush they could find.[25]

In the other provinces, the same approach was followed: only as species decline reached critical levels, so protection was afforded to them. In the Dutch Transvaal, in 1891, a new game law repealed former game laws, and made the holding of a licence mandatory for all species of game and birds, while forbidding entirely the hunting of elephants and hippopotami.[26] In 1893 a further law added to this list of prohibited animals buffalo, eland, giraffe and rhinoceros.[27] In 1894 this prohibition was repeated and strengthened. Ostriches (including their eggs) were added to the list of animals given complete protection.

4. The Behring Sea Fur Seals Convention

4.1 The dispute

It has been suggested that '[t]he modern rules of international environmental law have a short but rich pedigree;' and that they can arguably be traced back 'to the late nineteenth century, and an obscure spat between the United States and Britain' with the 'world's first reported environmental dispute concerned the little-known

[24] Ordinance 45, 31st March 1828: 'Whereas it is deemed unnecessary any longer to continue the rewards heretofore payable from the several district treasuries for the destruction of noxious animals: Be it therefore enacted, by His Honour the Lieutenant-Governor in Council, that from and after the passing of this Ordinance, the payment of all rewards heretofore granted and made payable by any law or ordinance for the destruction of noxious animals, of any kind or description, shall cease and determine.' By Authority, *Statute Law of the Cape of Good Hope* (1862) at 126-127.

[25] J. A. Pringle, *The Conservationists and the Killers, supra* note 23, at 63.

[26] *Ibid.* at 417-418. See H. J. Coster (reg.), *De Locale Wetten en Volksraadsbesluiten der Zuid-Afr. Republiek Gedurende de Jaren 1890, 1891, 1892 en 1893* (1894) 148-151. 'Wet No.6, 1891 (Zijnde wijziging van Wet No. 10, 1870) Tot Betere Regeling der Jacht op Alle Soorten Wild en Gevogelte in de Zuid-Afrikaansche Republiek. … 1. Het jagen, dooden of vernielen, op welke wijze ook, van olifanten en zeekoeien, is geheel verboden in de Zuid-Afrikaansche Republiek… 2. Niemand zal gerechtigd zijn eenig wild en gevogelte to dooden, te vangen of te vernielen, tenzij hij voorzien is van eene licentie voor het jagen in de Zuid-Afrikaansche Republiek…'.

[27] Wet No. 13, 1893; H. J. Coster (reg.), *De Locale Wetten, ibid.*

fur seals.'[28] At that time (the 1880s) international law, according to Sands, 'allowed countries sovereignty over their land territory and a narrow band of water up to a maximum of three miles off their coasts. Sovereignty meant total control.'[29] Beyond this three-mile limit, utilization of living resources was free to all.

In the late 1800's, fur seals were declining seriously and rapidly in the Behring Sea - being hunted by a number of countries; the United States, Russia, Britain (Canada) and Japan. The United States decided to arrest British ships sealing on the high seas. What happened is that in 1886 the United States seized three British schooners which were sealing some sixty miles from Alaska. After Britain protested, the US released the vessels. Three years later, however, the US stopped five more British ships and ordered three others to leave the Behring Sea.[30]

The US argued that it had a right to protect, and of property in, the fur seals which lived parts of their life cycles on the (US) Pribilov Islands - even where these seals were temporarily outside the three-mile limit of the US territorial sea.[31] Birnie writes that:

> '[s]ince large numbers of the seals frequented the Bering Sea islands and surrounding waters they came under the territorial jurisdiction of the adjacent coastal state either on its territory or within its three mile territorial waters, but not, of course, because of the high seas freedom, during their migrations beyond these limits although the same stocks could also be fished there. The United States proceeded, following its annexation of Alaska [ceded by Russia in 1867], to prohibit the killing of fur seals within American jurisdiction. ... The United States began increasingly to assert a unilateral right to regulate the fur seals for conservation purposes on the grounds that it had exclusive jurisdiction over them. Foreign vessels ignored these United States assertions and continued to exploit seals beyond the American three mile limit.'[32]

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[28] The seals were born on the Pribilov Islands. They migrated across the Bering Sea to the United States. In May each year the bulls returned from Alaska to the islands, and a month or so later the females followed. They had been doing this since time immemorial, without human interference. In the 1880s that changed. Philippe Sands, *Lawless World: Making and Breaking Global Rules* (Penguin Books, 2006) at 71-74.

[29] For the British, freedom of navigation on the high seas included the right to take all the fruits of the sea. Specifically, it allowed the hunting of fur seals while they were making their annual migration from Alaska to the Pribilov Islands each spring. Between 1868 and 1897 the reported catch of Pribilov seals on land was 2,440,213, with more than 650,000 being taken by pelagic sealing, although this number is almost certainly underestimated. *Ibid.* at 71-74.

[30] J. Joy, 'Conservation or the Cannon-Shot Rule' *White, Ottenheimer & Baker: Barristers & Solicitors* June 2001, available at <http://www.wob.nf.ca/News/2001/conservation.htm> (visited 30 October 2002).

[31] 'Faced with continued decline in seals because of over-exploitation on the high seas, despite its enactment of laws to conserve them and their pupping grounds, which lay within US territorial jurisdiction, the USA arrested British (Canadian) vessels taking the seals on the high seas, arguing that it had a right of protection and property in the fur seals frequenting the Pribilof Islands even when found outside the US three-mile limit.' Patricia Birnie and Alan Boyle, *International Law and the Environment* (2nd ed., Oxford University Press, 2002) at 649.

[32] Patricia Birnie, *International Regulation of Whaling: From Conservation of Whaling to Conservation of Whales and Regulation of Whale-Watching: Volume I* (Oceana Publications, 1985) at 94.

4.2 The tribunal and the arguments

The matter was then, in 1892, put to an arbitral tribunal for decision. Sands writes that '[t]he two governments agreed to refer the dispute to an international arbitration, one of the first of its kind, which was presided over by two arbitrators appointed by the United States, two appointed by Great Britain, one appointed by the President of France, one appointed by the King of Italy, and one appointed by the King of Sweden and Norway.[33] The United States claimed a property right in the seals, as well as the right to protect them for the benefit of humankind. It argued for these rights under international law, invoking the practice of nations, the laws of natural history and the common interests of mankind. The United States said that it alone possessed the power to preserve the seals, as a trustee 'for the benefit of mankind'.[34]

In Birnie and Boyle's words:

> '[t]he USA contended that this right was based upon the established practice in common and civil law, the practice of nations, upon the laws of natural history, and upon the common interests of mankind, in view of the fact that the fur seals were bred within its territory, were protected there by the USA and were a valuable resource and source of income for its people. The USA regarded itself as the trustee of the herd for the benefit of mankind. Britain (for Canada) argued that it had the right to hunt seals on the high seas; they were either *res communis* or *res nullius* in status, not the exclusive property of the USA. The USA countered that the high seas were 'free only for innocent and inoffensive use, not injurious to the just interests of any nation which borders upon it', and also that the seals had an *animus revertendi*, returning cyclically to US territory, and were thus to be equated to domestic animals which could be the subject of property rights.'[35]

'The arbitral tribunal,' continue Birnie and Boyle, 'found against the US arguments. It held that as Britain had protested against the Russian decree, Russia had neither held nor exercised exclusive rights in the Behring Sea beyond areas of national jurisdiction. Thus the USA had not acquired such rights from Russia, had no property rights in the seals and no right to protect them beyond the three-mile limit. Freedom of the high seas was held to be the prevailing doctrine.'[36]

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[33] Tuomas Kuokkanen (ed.), *Seminal Cases of International Environmental Law* (Edita, 1999) at 15-16.

[34] The British defence was less convoluted... Britain claimed that the Bering Sea was an "open sea" in which the right of all nations to fish could not be restricted by a unilateral act of the United States, unless a treaty between the two countries provided otherwise. ... Taken to its logical extreme, the British claimed the right to hunt the fur seals to extinction.' Philippe Sands, *Lawless World, supra* note 28, at 71-74.

[35] Patricia Birnie and Alan Boyle, *International Law and the Environment, supra* note 31, at 649.

[36] *Ibid.* at 649.

Birnie writes that:

> '[t]he tribunal ... held (with two arbitrators dissenting) that the United States had no right of property or protection in the fur seals beyond the three mile limit and could not therefore exclusively either exploit or conserve them. American laws relating to them could not be enforced on nationals of foreign states. ... Neither the parties nor the arbitrators were unmindful of the urgent need for conservation. ... The tribunal ... recommended measures for joint regulation by Great Britain and Canada of the seal fisheries in the Bering Sea. The recommendations were in the form of nine articles. ... [These] included measures that have now become a familiar set of weapons in the armouries of most fisheries commissions viz. a prohibited zone; a closed season in a defined area of the high seas; a limitation on the type of vessels used; licensing by the national governments concerned; use of a special identifying flag while sealing; keeping catch records; exchange between the two governments of data collected by them; prescription of certain kinds of gear; and government responsibility for selection of suitable crews for sealing. There was even a specific exemption in favour of sealing by indigenous Indians as long as it was for traditional purposes and the used traditional methods.'[37]

The arbitration tribunal gave its ruling in 1893, finding in favour of Britain by five votes to two, and thus ruling that 'high seas freedom trumped conservation'. However, Britain and the United States had agreed beforehand that if the US lost the case the arbitral tribunal should suggest new international rules to conserve the seals. The arbitral tribunal, therefore, proposed the first rules of modern international environmental law, regulating when and where seals could be captured. This 'first environmental case' revealed, Sands argues, an 'American desire to put conservation above economic interests. It also reflected a willingness on the part of both countries to restrict traditional sovereign freedoms with new rules of international law.'[38]

The cynical observer might, of course, not agree that the United States was putting 'conservation above economic interests'. The fur seals did represent an important economic resource; and one over which the US may have felt it had a special property interest.

4.3 The importance of the arbitral award

According to Joy, '[u]ntil the end of the 19th Century, coastal states argued in favour of maintaining traditional fishing rights on economic grounds. With the Behring [Sea] Fur Seals Arbitration the world entered the era of fishery conservation.'[39]

[37] Patricia Birnie, *International Regulation of Whaling, supra* note 32, at 99-100.
[38] Philippe Sands, *Lawless World, supra* note 28, at 71-74.
[39] J. Joy, 'Conservation or the Cannon-Shot Rule' *supra* note 30.

Birnie and Boyle emphasize that '[t]he importance of this decision to the development of the law concerning conservation of marine living resources cannot be overstressed.' According to these writers, the decision 'laid the twin foundations for subsequent developments over the next century' in the sense that, firstly, 'it confirmed that the law was based on high seas freedom of fishing and that no distinction was to be made in this respect between fisheries and marine mammals despite the very different characteristics of the latter, which the tribunal had examined;' and, secondly, that the decision 'recognized the need for conservation to prevent over-exploitation and decline of a hunted species, but because of the former finding, it made this dependent on the express acceptance of regulation by participants in the fishery.'[40]

The regulations suggested by the Arbitral panel, to be binding on the United States and Great Britain, included that there should be no capture or pursuit of fur seals within a sixty mile zone around the Pribilov Islands;[41] that there be a closed season, between 1 May and 31 July;[42] and that the regulations should not apply to 'Indians dwelling on the coast of the territory of the United States or of Great Britain, and carrying on fur seal fishing in canoes or undecked boats… propelled wholly by paddles, oars or sails and manned by not more than five persons each…'.[43] These three restrictions, in particular, can, it be argued, lead to a 'categorization' effect – especially of the particular animals taken.

It is interesting to see this arbitration as having been an early model for the International Convention for the Regulation of Whaling (ICRW)[44] – or at least as an important stepping stone toward that agreement. The eventual moratorium agreed to by the International Whaling Commission in 1982 being, perhaps, the most important eventual consequence. Generally, the history of multilateral conservation agreements has, though, seen the international community limping slowly and painfully toward better understanding.

Birnie writes that:

> '[t]he award pioneered the pattern of modern fisheries regulation, including the system adopted in the ICRW: ie whilst accepting the doctrine of high seas freedom and rejecting the United States claim to exclusive authority to promulgate conservation measures on the high seas beyond its territorial waters, it also supported the need for voluntary restraint by states in the exercise of freedom of fishing and laid down appropriate international measures. It presaged the limitation on high seas freedoms codified in the 1958 Geneva Convention on the

[40] Patricia Birnie and Alan Boyle, *International Law and the Environment, supra* note 31, at 649-50.
[41] Article 1, Tuomas Kuokkanen (ed.), *Seminal Cases, supra* note 33, at 17.
[42] Article 2, *ibid.* at 17.
[43] Article 8, *ibid.* at 18.
[44] International Convention for the Regulation of Whaling, Washington D.C., 2 December 1946, in force 10 November 1948, 161 *United Nations Treaty Series* 72.

> High Seas ie that all freedoms should be exercised with "reasonable regard" for the interests of other states exercising the same rights.'[45]

So, the legacy of the *Behring Sea Fur Seals Arbitration* is a mixed one. It entrenched freedom of the high seas and thereby made it that much more difficult to bring an end to the rampant destruction of populations of marine mammals; and left us to this day labouring under the weight of the impression many important actors have, that they can do as they please with natural resources on the high seas. At the same time, many of the principal 'tools' we use even today to give content to management systems protective of wildlife have their origins in the arbitral award. These 'tools' particularly include close seasons, restrictions on certain weapons, exemptions for certain classes of people, and so forth.

4.4 The lessons not learned

In the short-term, the *Behring Sea Fur Seals Arbitration* did not assist the fur seals themselves meaningfully. This could hardly be otherwise, as it was essentially nothing more than a contract between two countries – and these were only two of the four states engaged in hunting the Behring Sea fur seals; Russia and Japan being the others. In fact, some US and Canadian vessel owners simply re-registered their vessels under Japanese and other flags to evade the US and Canadian regulations. The dramatic decline in seal stocks in the area continued until it was eventually realized by all the participants that only conclusion of an international regulatory treaty among all states involved in the sealing could save them. This cycle of events, comment Birnie and Boyle, has been repeated in almost all exploited fisheries.'[46]

Unfortunately, this cycle of overexploitation has yet to be recognized on the global scale. In this sense, we have not learned all that we could have learned from the arbitral award; and consideration of the award is still both relevant and important.

5. The 1900 London Convention on the Preservation of Wild Animals, Birds and Fish in Africa

Curiously, the British chose to be markedly influenced by the Germans (via East Africa) in their choices in regard to conservation measures in the 1890s.[47] The conclusion of an 'acceleration' of conservation measures in British and German territories in the 1890s, and cooperation between the British and the Germans, culminated

[45] Patricia Birnie, *International Regulation of Whaling, supra* note 32, at 100-101.
[46] Patricia Birnie and Alan Boyle, *International Law and the Environment, supra* note 32, at 650.
[47] J. M. Mackenzie, *The Empire of Nature, supra* note 3, at 205.

in the Convention on the Preservation of Wild Animals, Birds and Fish in Africa – London, 19 May 1900.[48]

This Convention emerged from a German-proposed Conference and suggested that all colonial powers should introduce game regulations. Most parties never ratified the Convention, but the Germans and British did so enthusiastically.[49] It was important for certain African countries, German and British colonies, in particular; because Germany and Britain, as co-sponsors of the Convention, ratified it and attempted to give it expression in their colonies.

The agreement aimed at preventing uncontrolled massacres of wild animals and ensuring the conservation of diverse wild animal species.[50] It set up a selected mechanism for the protection of 'useful' or rare and endangered wild animal species and the sufficient reduction of 'pest' species.[51] It also encouraged signatories to engage in the creation of 'reserves'.[52] The Convention never entered into force because most of its signatories did not ratify it. It is unknown whether this was because the provisions were too strict for them; or whether their failure was for undisclosed political reasons. However, this first initiative was not worthless. It helped some signatories to enact legislation related to the protection of wild fauna in their respective colonial territories.[53]

Parker writes that:

> '... the first international conference on preserving Africa's fauna was held in London in 1900. ... Surprising many modern conservationists, the London Convention listed animals which might not be killed under any circumstances, decreed the protection of immature and female animals, ordered the setting aside of reserves, called for the strict regulation of trade in game products and many other restrictions besides. In a nutshell, in principle little new emerged over the subsequent hundred years.'[54]

This judgment is probably not harsh. Conservationists worldwide, certainly as reflected in international conventions currently in force, still categorize species.

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[48] IUCN Environmental Law Programme, '*An Introduction to the African Convention on the Conservation of Nature and Natural Resources',* IUCN Environmental Policy and Law Paper No. 56 (2004) at 207-209. Convention concerning the Preservation of Wild Animals, Birds and Fish in Africa, London, 19 May 1900.

[49] J. M. Mackenzie, *The Empire of Nature, supra* note 3, at 208.

[50] Preamble; see IUCN Environmental Law Programme, '*An Introduction to the African Convention', supra* note 49.

[51] Articles II (1), II (13) and II (15); *ibid.*

[52] Article II (5); *ibid.*

[53] *Ibid.* at 3.

[54] 'Herman von Wissman, Governor of German East Africa (Tanganyika), was keenly interested and it was his brainchild to establish uniform conservation measures across Europe's African territories. Whitehall picked up the idea and...' I. Parker, *What I Tell You Three Times is True: Conservation, ivory, history and politics* (Librario Publishing, 2004) at 42.

7. The 1902 Convention for the Protection of Birds Useful to Agriculture

7.1 The Convention

The 1902 'Paris Convention'[55] categorized certain birds as being useful to man for agricultural purposes; and categorized certain other bird species as 'noxious'. This was done largely on the basis of which species were seen as being useful because insectivorous and therefore able to assist man in the protection of crops; and those which were seen as competing with man's interests, or competing with bird species useful to man. Ironically, many of these 'noxious' birds are the species to which we today give special protection.

Article 1 of the Convention provided that birds useful to agriculture, 'particularly the insect-eaters and namely those birds enumerated in the first Schedule attached… shall be unconditionally protected by a prohibition forbidding them to be killed in any way whatsoever, as well as the destruction of their nests, eggs and broods'.[56] The Schedules attached to the Convention make for extremely sobering reading.

7.2 Schedule I

Schedule I is entitled '[u]seful birds'; and contains the following species:

Night birds of prey (owls):
Little owl; pygmy owl; hawk owls; tawny owl; barn owl; short-eared owl; long-eared owl; small tufted owl.

Picariae:
Woodpeckers.

Syndactyles:
Common roller; bee-eater.

Perching-birds:
Hoopoe; tree-creeper, wall-creeper, nuthatch; swift; nightjar; nightingale; blue-throat; redstart; red-breast; furze-chart, wheatear; accentor.

Sylvinae:
Common warbler; lesser white-throat; common tree-warbler; aquatic warbler; great warbler; reed warbler, sedge warbler, grasshopper warbler; fantail warbler; willow warbler; gold-crested wren, wren; titmice; flycatcher; swallows; wagtails; pipits; crassbill; bunting, serin; goldfinch, siskin; starling, rose-coloured starling; white and black storks.

[55] Convention for the Protection of Birds Useful to Agriculture, Paris, 19 March 1902.
[56] *Ibid.*

7.3 Schedule II

It is Schedule II, entitled 'noxious birds', which makes for staggering reading for the modern environmentalist. Consider the following list of bird species which people were encouraged to exterminate:

Birds of prey:
Bearded vulture; eagles, all kinds of; sea eagles, all sorts of; osprey; kites, black-shouldered kites, swallowtailed kites; falcons, gyr-falcons, peregrine falcons, hobby, merlin-stone falcon, all sorts of; common goose-hawk; harriers
Owls:
Eagle owl
Perching-birds:
Raven; magpie; common jay
Herons:
Grey and purple herons; bittern; night heron
Swimming-birds:
Pelican; cormorant; smews; divers

It has taken mankind a very long time to reach our current understanding of the complexities of species interrelationships; and it would be dangerously arrogant to make the assumption that our current understanding is correct. Probably at the time of the drafting of the Paris Convention scientists had the same confidence in their understanding that scientists do today. What understanding we will eventually come to have is impossible to know; and caution is therefore important.

7.4 Early understanding (or lack thereof)

As an example, in the South African context, of how understandings of the complexities inherent in managing biological diversity have changed can be seen from the appointment, in 1902, of Major James Stevenson-Hamilton as the warden of the Sabi Game Reserve in South Africa – the game reserve that was eventually, in 1926, to become the Kruger National Park. In his time as warden, especially in the earlier years, Stevenson-Hamilton shot over three hundred lions; as well as innumerable leopard, wild dog, cheetah and hyena. The object was to enable the herbivores, the prey species, to increase their numbers.

Meiring records that soon after his arrival Stevenson-Hamilton wrote: '… "I think the carnivora should be reduced;" his first aim being 'to restore the proper game balance.'[57] 'In those early days,' according to Meiring, 'lion were officially regarded as vermin… because there were so many of them in the Park.'[58]

[57] P. Meiring, *Behind the Scenes in Kruger Park* (Perskor Publishers, 1982) at 23.
[58] *Ibid.* at 44.

To his credit, Stevenson-Hamilton realized eventually, through experience, that healthy ecosystems require natural balances of predators and prey; with the predators and scavenger-hunters weeding out those prey animals which become older, injured, or diseased. This approximates far more to our current understanding.

8. The 1933 Convention Relative to the Preservation of Fauna and Flora in their Natural State

Following the failure of the London Convention of 1900, which never came into force, an international congress on the protection of nature was held in Paris in 1931 to propose the convening of an international conference for the adoption of a new text. On 8 November 1933, the Convention Relative to the Preservation of Fauna and Flora in their Natural State (the 'London Convention') was adopted. The Convention entered into force on 14 January 1936.[59]

Compared to its predecessor, the scope of the Convention was extended markedly – to include plants even. Its objective remained utilitarian – to preserve supplies of species which were economically valuable and popular with trophy hunters. In this regard, it provides a list of plant and animal species that were selected either to receive absolute protection (class A) or a lower level of protection (class B). The Convention, however, took a bold step into the future by rejecting the concept of nuisance species. It was also the first binding legal instrument, binding on the states which adopted it at least, to provide for the creation of protected areas in Africa – such as national parks and nature reserves. The Convention was signed by Belgium, Egypt, France, Italy, Portugal, South Africa, Spain, Sudan, and the United Kingdom; India and Tanzania later acceded.[60]

9. The 1946 International Convention for the Regulation of Whaling

9.1 The exclusion of small cetaceans

In 1946 twelve whaling nations sat around a table and created a Convention with a body (the International Whaling Commission, or IWC)[61] which would meet annually to determine quotas for the parties; which quotas the parties would then largely ignore. As well as setting quotas within species, the parties, through the Commission, then listed certain species to which the Convention would apply. The Convention does not apply to so-called 'small cetaceans'.

[59] IUCN Environmental Law Programme, '*An Introduction to the African Convention', supra* note 47, at 3.
[60] *Ibid*; see also <http://www.fco.gov.uk/Files/kfile/021_FaunaFlora.pdf> (visited 30 May 2007).
[61] See, generally the website of the International Whaling Commission: <http://www.iwcoffice.org>.

Mulvaney and McKay argue that ' ..."small cetacean" is not a strictly biological term but rather a political construct. Its genesis lies in a seemingly innocuous list of species appended to the 1946 [ICRW]'.[62] Where the legal basis for excluding species is that they were not initially listed must be considered as, at best, spurious.[63] Komatsu & Misaki tell us that '[t]he list was developed soon after the IWC was established when member countries said species needed to be listed for management purposes'.[64] It might even be, according to the same writers, that the Baird's beaked whale, for instance, was omitted from the list because it was simply not known to Western nations – being hunted in Japan only.[65]

What this categorization of species has led to is a situation where certain species are hunted, and others not. As an example of the arbitrary nature of such selection, the northern bottlenose whale is not classed as a small cetacean; while the, larger, Baird's beaked whale *is* so classed.[66]

The hunting of small cetaceans is one of the more controversial aspects of the regulation of whaling by the International Whaling Commission. While the matter is not officially under the auspices of the IWC, according to the terms of the ICRW, member states opposed to the hunting of small cetaceans have succeeded in having the matter put on the agenda for discussion at each annual meeting. While there is no way, legally, for those opposed to the practice to stop it; they do put public pressure on those member states – such as Japan and the Faroe Islands – which do practice such hunting.

9.2 Aboriginal subsistence hunting

Reminiscent of the *Behring Sea Fur Seals Arbitration*, the IWC's 1982 moratorium on commercial whaling does not prohibit whaling by those populations classified as aboriginal subsistence whalers. The classification of aboriginal and subsistence is, however, controversial in itself. Since at least 1986, when the moratorium on commercial whaling came into force, Japan has argued that certain of its coastal villages are suffering severe distress as a result of their inability to whale as they traditionally have done. The majority of the members of the IWC, however, have thus far refused to recognize these coastal populations as aboriginal subsistence whalers; given that much of the whale meat collected by such villagers is sold, rather than being consumed by the whalers themselves. The Japanese, in turn, argue that local sales, and

[62] This "Annex of Nomenclature"... simply listed the species that were most likely to be targeted by the whaling industry of that time.' K. Mulvaney and B. McKay, 'Small Cetaceans: Status, Threats, and Management' in W. C. G. Burns and A. Gillespie (eds), *The Future of Cetaceans in a Changing World* (Transnational Publishers, 2003) 189-216 at 189-90.

[63] *Ibid.* at 213-215.

[64] M. Komatsu and S. Misaki, *Whales and the Japanese: How we have come to live in harmony with the bounty of the sea* (Institute of Cetacean Research, 2003) at 32.

[65] *Ibid.*

[66] K. Mulvaney and B. McKay, 'Small Cetaceans', *supra* note 61, at 189-90.

tourism, *are* the aboriginal subsistence uses to which whale meat has been put in the area.

Whether the Japanese coastal whalers ever are recognized to be aboriginal subsistence whalers, for the purposes of the IWC, or continue not to be, is a question that depends on the majority vote within the management organization. What the division leads to, however, is a situation where certain populations of whales – such as the Bering-Chukchi-Beafort Seas stocks of bowhead whales – find themselves subject to aboriginal subsistence whaling regimes; while other populations – such as the North Pacific minke whale populations – do not.

In October 2002 an interesting intersessional meeting of the IWC was held – the organization's 5th Special Meeting. The main item on the agenda was a proposal put forward jointly by the governments of the United States and the Russian Federation in respect of aboriginal subsistence huntiSng of bowhead whales. That an intersessional meeting was required was because at the regular annual meeting of the IWC, held in May 2002, the US/Russian proposal for a renewal of their five-year quota for bowhead whales had been declined. The May 2002 proposal had been opposed by Japan; ostensibly on the ground of scientific uncertainty as to bowhead population numbers.

By consensus, the delegates to the IWC's intersessional meeting approved the proposal so as to allow up to 280 bowhead whales to be landed in the period 2003 through 2007, with no more than 67 whales to be struck in any given year, and increased reliance on information and opinions given by the IWC's Scientific Committee. An annual average of 51 bowheads for the United States and 5 for Russia was approved.[67] Although not actively voting for it, Japan did not oppose the US/Russian proposal; and, in a clear *quid pro quo*, those latter two states in their turn voted in favour of Japan's resolution expressing concern the plight of its communities involved in coastal whaling. The Japanese proposal did not, however, gain sufficient support from other delegate parties – a 75% vote being required for a Schedule amendment. The United States had not previously supported similar Japanese proposals – and as recently as the 53rd Annual Meeting in 2001 had expressly spoken out against such a proposal.[68]

What *is* the current bowhead population? If only 8 000 to 10 000, then 67 per annum is arguably a take that might make a significant difference to the population; at least when compared to the Japanese demand for a commercial take of a few thousand minke whales per annum from a population that might be as high as 750 000 in the Antarctic, and even a million globally. The events of the two meetings in 2002 arguably did something to expose hypocrisy on both sides of the debate: the

[67] See generally the Chairman's Reports of the 53rd Annual Meeting of the International Whaling Commission (IWC, 2002) at 28; the 54th Annual Report of the IWC (IWC, 2003) at 35-37; and the 5th Special Meeting of the IWC (IWC, 2004) at 144-145.

[68] *Ibid.*

Americans were willing out of self-interest to abandon their usual, and apparently firm, belief that Japanese coastal whaling is commercial in nature; and the Japanese were willing to change their argument, that bowhead whale numbers were too uncertain to allow hunting, in return for American support in regard to the hunting of minke whales off the Japanese coast.

The 55th meeting of the IWC (Berlin, June 2003) set quotas to run from 2003: until 2007, up to 280 bowhead whales may be taken by Alaskan eskimos and by the Chukotka people; and up to 20 humpback whales by the Bequian people of St Vincent and the Grenadines. Until 2006, 620 Eastern North Pacific gray whales may be taken for 'traditional, aboriginal and subsistence needs'; while Greenlanders may take 19 West Greenland fin whales annually, 175 West Greenland minke whales annually, and 12 East Greenland minke whales annually.[69] The point being made in the present article is simply that considerations other than strictly scientific ones relating to species status intrude into the management of biological diversity.

9.3 Whale sanctuaries

The idea of sanctuaries protective of whales has been with us for a long time. Martin writes that '[b]y 1914,... At that time there was a belief within the government and Fisheries Department that the humpback whale breeding grounds lay to the north-east of these areas and that they should be protected. This protection was one of the earliest forms of whale sanctuary in Australian waters.'[70]

In more recent times, there have been a number of efforts made – by the anti-whaling member states in the IWC – to protect whales by declaring sanctuaries. This issue provokes contention annually as, at the beginning of each year, the Japanese whaling fleet sails to the Southern Ocean in order to take whales for research whaling purposes. The IWC declared a sanctuary in this area, the Southern Ocean Sanctuary, in 1994. Japan, however, lodged a formal objection (a reservation) to the Sanctuary in 1994; and is not, therefore, required to observe it.

The trouble with whale sanctuaries in respect of biodiversity protection is, to the mind of the present writer, that they are there to protect one species only – and, as such, they risk creating an imbalance. There is much to be said for the reservation of specified areas, as long as these are large enough to be viable, in which all biodiversity is protected. This enables scientists to consider how ecosystems operate in a state as close as possible to what is natural. There is a problem, however, where one, or even several, species are singled out for protection – and all others remain utilized or over-utilized.

[69] Final Press Release, IWC 55, Berlin, 16-19 June 2003; available at <http://www.iwcoffice.org/FinalPressRelease2003.html> (visited June 2003).

[70] S. Martin, *The Whales' Journey: A year in the life of a humpback whale, and a century in the history of whaling* (Allen & Unwin, 2001) at 133-134.

9.4 The status of whales generally

Rose and Paleokrassis write that '[u]nlike most other species in the marine habitat, whales are now accorded a "wildlife status" which recognizes their intrinsic value as species for their own sake.'[71] However, this is far too simplistic – even dangerous. Value must be accorded to all ecosystem components.

As whale stocks have increased in recent decades – at least of certain whale species, such as minke whales – and pro-whaling countries have pushed to be permitted to resume commercial whaling; so anti-whaling countries have retreated somewhat into the argument that whales as a whole are a species which are somehow 'special' and apart from other species. This approach carries inherent dangers. Whether they are being protected as especially sophisticated and emotional animals, or being utilized as a food source, whales need to be understood and managed within their ecosystems.

10. The 1973 Convention on International Trade in Endangered Species (CITES)

10.1 CITES; and problems with its approach

The Convention on International Trade in Endangered Species of Wild Fauna and Flora was adopted at Washington DC in 1973; and entered into force on 1 July 1975.[72]

According to the Preamble, the Contracting States recognize that 'wild fauna and flora in their many beautiful and varied forms are an irreplaceable part of the natural systems of the earth which must be protected for this and the generations to come' – the intergenerational equity idea is present, from the Stockholm Conference of 1972. The States are 'conscious of the ever-growing value of wild fauna and flora from aesthetic, scientific, cultural, recreational and economic points of view...', and 'recogni[ze] that people and States are and should be the best protectors of their own wild fauna and flora' – paying homage to sovereignty, as usual. The States 'recogni[ze], in addition, that international cooperation is essential for the protection of certain species of wild fauna and flora against overexploitation through international trade...' and are 'convinced of the urgency of taking appropriate measures to this end'. It can be seen that the Convention is ostensibly a protectionist treaty – and quite firmly rooted in the emerging environmental discourse of the early

[71] G. Rose and G. Paleokrassis, 'Compliance with International Environmental Obligations: A case study of the International Whaling Commission' in J. Cameron, J. Werksman and P. Roderick, *Improving Compliance with International Environmental Law* (Earthscan, 1996), 147-175 at 148.

[72] Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES), Washington DC, 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, <http://www.cites.org>.

1970s. However, the implicit recognition that trade is a reality (and 'here to stay') leads one to the inevitable conclusion that the treaty is also a trade treaty – a 'regulation of trade' treaty.

This is a problematic approach for a treaty that is, at least, in part intended to be protective of species and of biological diversity. The treaty takes a fairly rigid approach toward categorizing species; and yet, having only extremely limited internal jurisdiction, does not acknowledge that species might depend upon other species, in properly functioning ecosystems, for survival. There are numerous related problems; such as that of so-called 'lookalike' species – where species in desperate need of protection might not receive it due to being confused with species not in such need.

10.2 Categorization of species under CITES

Article II is headed 'Fundamental Principles' and what this Article does is create the three Appendices into which listed species are placed, or categorized, and in terms of which they are thereby afforded different degrees of protection against overexploitation by trade. Article I.1 states that Appendix I species include all species threatened with extinction which are or may be affected by trade. Trade in these specimens 'must be subject to particularly strict regulation in order not to endanger further their survival and must only be authorized in exceptional circumstances'. Article I.2 states that Appendix II includes '(a) all species which although not necessarily now threatened with extinction may become so unless trade in specimens of such species is subject to strict regulation in order to avoid utilization incompatible with their survival; and (b) other species which must be subject to regulation in order that trade in specimens of certain species (as referred to in (a)) may be brought under effective control'. Article I.3 states that Appendix III includes 'all species which any Party identifies as being subject to regulation within its jurisdiction for the purpose of preventing or restricting exploitation, and as needing the cooperation of other Parties in the control of trade.' Article I.4 then regulates Articles I.1, I.2 and I.3 by providing that 'the Parties shall not allow trade in specimens of species included in all three Appendices, except in accordance with the provisions of [CITES]'.

The categorization idea could hardly be clearer; protection of wildlife species is to be done on a strict system of classification according to perceived levels of danger to populations of particular species.

10.2.1 The elephant: a specific example of categorization under CITES

In 1989 the elephant was listed on Appendix I of CITES, thus giving the species almost complete protection against international trade. However, the ban on trade was never as complete as it might have seemed. 'The final vote [in 1989],' writes Chadwick, 'was seventy-six to eleven in favor of moving the African elephant onto Appendix I, with a ban on all further trade in ivory and a resolution that all existing stocks of tusks be destroyed within months. Through the auspices of Great Britain,

an exception was made for Hong Kong, which was given a six-month window in which to dispose of its stock. Also, the import and export of tusks from trophy hunting would still be permitted.'[73] This latter 'trophy hunting' exemption was a concession to the powerful hunting lobby in the United States, which might otherwise not have supported an Appendix I listing.

What this means is that the United Kingdom and the United States both got just what they wanted - the Appendix I listing, but with strategic exemptions in their favour. This accommodation of special, niche, interests in the face of what is otherwise a blanket ban seems problematic to the present writer. Ever since the Appendix I listing in 1989, sports hunters have been entitled to export their trophies. A significant problem with this approach, in the present writer's view, is that the exemptions discussed seem to have been granted not on scientific bases; but instead in order to accommodate the narrow political and economic interests of certain states.

10.2.2 Split listing and downgrading

Further, the species – or at least certain populations thereof – has been 'downgraded' from Appendix I on several occasions since 1989. Such downgrading has been done legitimately. As Bonner explains:

> '... as the date for the [1989] CITES meeting approached, the ban advocates faced growing support for an accommodation to the southern Africans. It would be accomplished with a "split listing": the elephant populations in Tanzania, Kenya and other countries where poaching was a problem would go on Appendix I, while those in Botswana, South Africa and Zimbabwe would remain on Appendix II. This was the most just and intellectually honest approach. It was also the legally correct one, since the elephants in those three southern countries were certainly not endangered under international law.'[74]

The description of a split listing as the most 'intellectually honest' approach is on the basis that the elephant is arguably not endangered in all of its range spots; and that it therefore does not, in all areas, meet the 'endangered status' requirement for its Appendix I listing. In the event, a compromise was reached; in Bonner's words:

> '[t]he elephant would be declared endangered, and placed on Appendix I, but a country could get its population "downgraded" to Appendix II if a panel of experts determined that the country was managing its elephant populations well and controlling the movement of ivory out of the country.'[75]

Such selective downgrading was eventually to happen in both 1997 and 2002. In 1997, Botswana, Namibia and Zimbabwe were given permission to sell certain

[73] D. H. Chadwick, *The Fate of the Elephant* (Key Porter Books, 1992) at 344.
[74] R. Bonner, *At the Hand of Man: Peril and Hope for Africa's Wildlife* (Simon & Schuster, 1993) at 151.
[75] *Ibid* at 157.

stockpiles of ivory to Japan, subject to certain restrictions; a sale which took place in April of 1999. In 2002, South Africa was given similar permission; however, as at the date of writing of this article in 2006, no such sale had taken place – ostensibly because not all required restrictions had been satisfied.

10.2.3 The problem with categorization of the elephant

The African elephant is a potent symbol of and for conservation efforts worldwide. However, the true value of wild animal species must be considered not as abstract symbols, but as essential components of their ecosystems. The elephant has even been described as a super-keystone species. It is truly the landscape architect of the African bush and many physical and biological aspects of its habitat are dependent on its continued presence. Efforts to manage the elephant can arguably be seen, therefore, as efforts to manage the elephant's environment too – far more so than can be said for most other species.

Managing elephants and their environments is not easy. Parker submits that:

> '[i]sland biogeographic theory is compelling. ... Africa's national parks are all becoming islands to which the theory will apply. ... No elephant population yet studied has been stable or 'in balance' with its environment. ... Elephants need continents, not islands - even if they are called national parks. ... As park managers the length and breadth of Africa have been learning, elephants introduce chaos because no park is big enough to hold more than a population cell or two - at most several. ... In terms of elephant ecology, a single elephant population in a national park is as incomplete a phenomenon as a single elephant in a zoo enclosure.'[76]

The current approach within CITES is not, arguably, within even the elephant's own best interest; let alone that of the various ecosystems in which the species is found.

11. The 1980 Convention on Conservation of Antarctic Marine Living Resources

11.1 The Convention

It has been contended that the 1980 Convention on Conservation of Antarctic Marine Living Resources (CCMALR)[77] largely contains views which have their origins in the 1970s, 'especially concerning a more ecological approach to management'.[78]

[76] I Parker *What I Tell You Three Times is True: Conservation, ivory, history and politics (Librario Publishing Ltd, 2004)* at 394-6.

[77] Convention on Conservation of Antarctic Marine Living Resources, Canberra, 20 May 1980, into force 7 April 1982, 19 *International Legal Materials* (1980) 841, <http://www.ccamlr.org>.

[78] Patricia Birnie, *International Regulation of Whaling, supra* note 32, at 522.

It is, in fact, interesting, and illuminating, to consider the development of the treaty as an early example of a treaty taking an 'ecological' approach - rather than a largely anthropocentric approach. Birnie writes that:

> '[t]he CCMALR consists of a Preamble and thirty three articles, and is a radical legal development being not so much a fisheries convention in the old mould ..., as 'a broad Convention for conservation of the Antarctic environment and ecosystem". It takes a broad ecological approach to conservation of the Antarctic environment and ecosystem, … This, however, is objectionable to some states, which see ecological criteria for conservation as a potential threat to resource exploitation.'[79]

This is ironic, given the recent adoption of the 'ecological approach' by proponents of increased use within the context of the International Whaling Commission – as will be seen in the conclusion to this article.

Lyster writes that:

> '...CCAMLR obliges its Parties to adopt an "ecosystem approach" to the exploitation of Antarctic marine living resources. This means, for example, that when the Commission sets catch limits on krill fishing, it must not only consider the impact on krill populations but also the impact on populations of other animals, such as whales and penguins, which depend upon krill for food. The traditional approach of fisheries treaties is to consider only the stock being fished when setting harvest levels.'[80]

11.2 The Convention and the International Whaling Commission

On the question of cooperation between the CCAMLR and the IWC; Birnie writes that:

> '[t]he conclusion of this treaty was undoubtedly a most important development, adding new techniques to the strategy for conservation of cetaceans in Antarctica, an ecological approach to management of a large marine area, including dependent species; the need to cooperate with states controlling common stocks and to develop mechanisms for collaboration with other concerned organisation.'[81]

At the 1980 meeting of the IWC, a Resolution was adopted on cooperation and coordination between the IWC and the (then-proposed) CCAMLR. In the Resolution it was resolved that:

[79] *Ibid*. at 525.
[80] S. Lyster, *International Wildlife Law* (Grotius Publications, 1985) at 156-58.
[81] Patricia Birnie, *International Regulation of Whaling, supra* note 32, at 531.

> 'WHEREAS it is the purpose of the [IWC] to provide for the effective world wide conservation and management of whale stocks; WHEREAS the stocks of whales utilising the Southern Ocean constitute an important part of the responsibilities of the [IWC]; ... WHEREAS Article VI of the [CCAMLR] includes provisions that nothing in that Convention shall derogate from the rights and obligations of Contracting Parties under the [ICRW]; WHEREAS Article IX of the [CCAMLR] provides [that there] should [be measures taken to provide that there will be] no inconsistency between obligations of Contracting Parties under such regulations or measures and conservation measures which may be adopted by the Commission; ... The [IWC] ... BELIEVING that parties to the [CCAMLR] in the development of the administrative and procedural mechanisms of the Convention, will give consideration to the role of the [IWC] in the management and conservation of whales in the Southern Ocean ...REQUESTS that the [IWC] be given appropriate status in order that it can contribute to activities of the proposed Commission [of the CCAMLR]. SIMILARLY the [IWC] offers a corresponding contributory role in its activities to the representatives of the proposed Commission [of the CCAMLR].'[82]

Birnie argues that the relationship between the two treaties must, and will, be developed. 'The need,' she writes:

> 'for a close relationship between the IWC [and the] CCAMLR... was clearly established [at the first meeting, Hobart, in] 1982; the nature and mechanism of the working relationship was not, but in November 1982 discussions took place between the Secretary of the IWC and the CCAMLR Executive Secretary. They agreed that under the IWC Rules of Procedure the mechanism already exists for permitting CCAMLR observers to attend both IWC and SC Meetings (and the IWC has adopted a Resolution allowing CCAMLR to do so);... These informal discussions are no more than a starting point; further action to formalise the relationship will be needed if the essential close cooperation is to be established. The IWC Secretary intends to establish links between the Secretariats similar to those existing between IWC and CITES.'[83]

At IWC 34 in 1982 Australia stated that it believed that 'liaison and co-operation between the IWC and other organisations concerned either directly or indirectly with whales is necessary for the long term conservation of whales'. Australia argued that this was particularly so in relationship to the CCAMLR.[84]

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[82] IWC Resolution on Cooperation and Coordination Between the International Whaling Commission and the Proposed Commission for the Conservation of Antarctic Marine Living Resources IWC, Chairman's Report of the Thirty-Second Annual Meeting (21-26 July 1980).

[83] Patricia Birnie, *International Regulation of Whaling, supra* note 32, at 580-81.

[84] Australia Commissioner, IWC Report of the Plenary Sessions of the Thirty-Fourth Annual Meeting (19-24 July 1982) *Verbatim Record* 181.

It has been contended that it is critical, for 'considerations far beyond the management of whales,' that a better understanding of the Southern Ocean ecosystem be gained; and that, toward this, CCAMLR applies an ecosystem approach to the conservation and rational use of the Southern Ocean's living resources (primarily krill and fish). It has further been contended that, toward this end, 'CCAMLR's members have a strong history of ecosystem research, and of developing ecosystem models;' and that 'studying the biomass and dynamics of krill and krill predator populations (including whales, the data on which come from the IWC) are areas within the mandate of CCAMLR.'[85]

12. The 1992 Convention on Biological Diversity

12.1 The Convention

As it becomes apparent that CITES may be reaching the limits of the protection that it can offer to species, so newer treaties must be looked to. The 1992 Convention on Biological Diversity (CBD)[86] is perhaps the best example of new approaches that can be taken to the concluding of environmental treaties.

The Preamble to the CBD affirms that states have 'sovereign rights over their own biological resources'. However, it also affirms that the conservation of biological diversity is 'a common concern of humankind' and that states are 'responsible for conserving their biological diversity and for using their biological resources in a sustainable manner'.

It is worth quoting Christopher Stone's analysis of the CBD:

> '...there is a... reason why a higher than average level of obscurity and equivocation - not merely in detail but in sense of institutional mission – was probably unavoidable. The explanation is to be found in the Rich-Poor tensions which have left their mark on all the recent environmental accords, but perhaps affected the CBD in particular. ... These divergent motives, the persistent tensions, and efforts alternately to ease and ignore them, have all left their imprint on the text and on the ensuing progress of the parties.'[87]

The very naming, the title, of the CBD – a 'framework convention' – indicates at once that a high degree of compromise is inherent in its formulation.

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[85] N. J. Gales, T. Kasuya, P. J. Clapham and R. L. Brownell Jr., 'Japan's whaling plan under scrutiny' 435/16 *Nature* (2005) 883-884 at 884.

[86] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>.

[87] C. D. Stone, *Should Trees Have Standing? And other essays on law, morals and the environment* (Oceana Publications, 1996) at 120-121.

The Biodiversity Convention goes beyond CITES by establishing objectives for the comprehensive preservation of biological diversity. The Biodiversity Convention has three objectives: 'the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources'.[88]

12.2 Perceptions of the CBD; and the role it might come to play in relation to other Conventions

The Biodiversity Convention goes further than CITES also by seeking to protect ecosystems and habitats, making provision for identification, monitoring and protection of areas important to species that might be endemic, threatened, migratory or have scientific, cultural, economic, social or evolutionary importance.

In light of the finding of the tribunal in the *Behring Sea Fur Seals Arbitration* that freedom of the high seas is the prevailing doctrine, the 1992 Convention on Biological Diversity is actually rather radical, especially when customary law of the sea is considered.

Not all perceptions of the Convention are favourable, however. Pickover, for instance, writes that:

> '[the CBD], a pro-use document, does not list 'international trade' as one of the six major causes of biodiversity loss. Proponents of use within southern African countries take advantage of this. They say developing countries want to see fewer, not more, exemptions for environmental purposes and that stimulating trade helps conservation.'[89]

The categorization of the CBD as 'pro-use' might not be altogether fair. Certainly, by providing for use, the convention is inherently pro-use; but it does provide sufficient *caveats* that non-use might even be seen as a valid option, and therefore that the convention is 'pro-balance'.

As to the ICRW, it has been said of it that it:

> '...has become too far removed from the realities of current political needs to meet adequately the needs of whale conservation. The reason that it has survived in its current anachronistic form is simply that its members are divided into two deadlocked camps: pro-whaling and anti-whaling countries. Any change in the balance between them may cause the machinery to collapse and so it remains static and antiquated.'[90]

[88] Art. 1 of the CBD.
[89] M. Pickover, *Animal Rights in South Africa* (Double Storey Books, 2005) 51.
[90] Rose & Paleokrassis, Compliance with International Environmental Obligations, *supra* note 71, at 154.

The question that arises, then, is whether the CBD could be used somehow to replace, to supplement, or to repair the ICRW. By 'repair' is meant the bringing together of the polarized parties in common understanding.

Birnie writes that:

> '...the CBD's only [significant] specific reference to the marine environment is found in Article 22 concerning the relationship of the Convention to other international conventions. This provision saves any effect on the rights and duties of the CBD parties deriving from other international agreements unless their exercise would cause "serious damage or threat to biological diversity."[91]... It is noteworthy that the CBD does not specifically refer here to the UN Convention on the Law of the Sea. This is not surprising since... the Convention does not explicitly require conservation of marine biodiversity and not all states (including some CBD parties) are parties to it.'[92]

According to Birnie, further:

> '...As Freestone has pointed out, the precise problems of conservation of marine ecosystems and biodiversity have been largely overlooked by the CBD despite their inclusion within its jurisdictional scope.'[93]

It might even be asked whether the adoption of the CBD means that whaling has arguably been brought into the fold of global governance. Birnie asks:

> 'Can it be said at present that a global regime (in a broad sense) exists for conservation of whales and other cetaceans, much less for conserving cetaceans as components of biodiversity or even any form of organized system?... Andresen [1999] suggest[s that the IWC] is linked only to a limited number of other bodies and instruments, such as the Delegation of the 1972 [UNCHE], the 1982 [UNCLOS], the 1973 [CITES], the 1992 [NAMMCO] and the various existing international trade regimes. ... The narrowness of this approach is open to debate following the adoption of the UNCED instruments and the CBD.'[94]

Despite her concluding sentiment, the fact that states have continued to treat the IWC as the prime managing authority for whaling, and have made no or little effort to involve the CBD, implies strongly that the narrow approach is not currently debatable. Whether it ought to be debated is another question; addressed by Birnie as follows:

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[91] Patricia Birnie, 'The Framework for Conservation of Whales and other Cetaceans as Components of Marine Biodiversity' in W. C. G. Burns and A. Gillespie (eds), *The Future of Cetaceans in a Changing World* (Transnational Publishers, 2003) at 106-07.

[92] *Ibid.* at 107-08.

[93] *Ibid.* at 110.

[94] *Ibid.* at 111-12.

> '[a] highly contentious issue is whether there remains a compelling rationale for continuing to vest exclusive authority for whaling issues, including population assessments and assessment of threats, in a single international organization. ... The IWC's membership remains limited and its research agenda is probably too narrow to encompass all of the critical research necessary to ensure that cetaceans remain an important component of marine ecosystems.'[95]

The significance of her point is that the CBD is considerably more representative of states generally than is the ICRW; and ultimately that the ambit of the IWC can be seen as being too focused. It might ultimately be better for the conservation of whales that greater issues of biological diversity be considered, with less categorization of species as a consequence; and that more states become involved.

According to Birnie:

> '...It must be acknowledged that the CBD is replete with vague terms and amorphous commitments by the parties. ... However, the exceptionally wide participation in the CBD, which the generality of many of its terms has facilitated, is salutary despite its lack of specificity concerning party responsibilities and the ambiguity of many of its provisions.'[96]

Of course, it might be argued that this is simply the usual trade-off in international law – without which compromise it might not have been possible to have had any convention agreed upon at all. 'Unfortunately,' writes Birnie, '...because of the many compromises required to secure consensus on an agreed text, while the Biodiversity Convention does provide a framework within which its parties can take the action it requires for conservation of marine biodiversity, it does not prescribe any explicit measures for doing so. ...'[97]

12.3 Problems

Newer treaties are starting to include mechanisms designed to facilitate improved compliance. 'It has become apparent in recent years,' writes Bowman, 'that the prospects of success of any treaty which has the protection of the environment as its principal objective will depend to a considerable extent upon the effectiveness of the institutional mechanisms which it incorporates.'[98] 'A crucial lesson,' Bowman continues, 'to be derived from the whole experience of the evolution of environmental law since the 1960s, brought home with particular force in the forum of the Rio

[95] *Ibid.* at 114-15.
[96] *Ibid.* at 118-19.
[97] *Ibid.* at 120-21.
[98] M. J. Bowman, 'The Ramsar Convention Comes of Age' 42 *Netherlands International Law Review* (1995) 1-52 at 33.

Earth Summit [the United Nations Conference on Environment and Development – 1992] is that paper obligations in the area of nature conservation mean nothing unless backed by hard cash.'[99]

Arguably, it can be seen from the changing provisions of newer treaties that this lesson may have been learned.[100] Governments in the developing world have become aware that their possession of natural resources gives them a strong hand, when demanding that treaties in regard to natural resources contain financial aid provisions. As such, they are unlikely today to conclude treaties that do not provide for such aid. And developed countries and non-governmental organizations are turning away from deterrence as an inducement to compliance, in at least partial recognition of the fact that deterrence has probably never been an enforceable means of ensuring compliance.

Stone provides a sober view of the CBD:

> '[a]ny critique of the CBD has to make allowances for the circumstances in which the Parties are operating. It is a hard time for the international environmental movement in general. ... It is easier to rally support for particular biological assets – tigers or wetlands – than for a relatively abstract *biodiversity*.
>
> Many wonder, why not simply protect tigers under CITES, wetlands under the Ramsar Convention on Wetlands, migratory birds under migratory bird conventions, and so on.'[101]

According to Stone:

> '[t]he World Charter for Nature proclaims that "every form of life is unique, warranting respect, regardless of its worth to mankind." But it is far from clear how one "respects" an ecosystem. Actions that perturb one equilibrium promote its successor. Fewer whales, more krill. And what if one is forced to choose among species, because we cannot respect *all* equally? Do we conserve the one that is oldest, or most rare, or highest on the food chain? What account is to be made for sites and species that occupy important places in the life of a culture? This area is replete with dauntingly complex questions – not merely to answer, but even to pose coherently.'[102]

[99] *Ibid.* at 39.

[100] One thinks, for instance, of the World Heritage Convention of 1972 (Convention Concerning the Protection of the World Cultural and Natural Heritage, Paris, 16 November 1972, in force 17 December 1975, 11 *International Legal Materials* (1972) 1358, <http://whc.unesco.org>); or the Global Environment Fund (GEF) or the CBD of 1992.

[101] C. D. Stone, 'The Convention on Biodiversity', *supra* note 87, at 127.

[102] *Ibid.* at 126. An iconoclastic view comes from Parker: '[a]rguing that biodiversity *per se* should be preserved so we do not lose chemicals and cures yet to be discovered, must surely be countered by the evidence that it may as equally be a source of further horrible diseases. What other eboloid sicknesses lurk in rain forest shadows?' I. Parker, *What I Tell You, supra* note 76, at 381.

As Stone suggests further of the CBD:

> '[t]he Convention is launched with a Preamble that sounds both chords - preservationism and development – without acknowledging the inherent disharmonies. Biological diversity is honored both for its intrinsic and its instrumental worth. It is affirmed to be a common *concern* of mankind. But the Convention stops short of endorsing a common heritage viewpoint... To leave no doubts on this score, the sovereign rights of states over their biological resources is explicitly affirmed.'[103]

Member States' obligations under the treaty are not onerous. They are entrusted to identify and monitor significant areas on their own, with 'regard' to the safety guidelines of Annex 1. Each Member State is to establish a system of protected areas 'as far as possible and appropriate' to conserve biodiversity.[104]

Creating such a system will never be easy. The difficulty is compounded by the problem that, even once created, such a system might not *by itself* be enough. Parker, for instance, contends that '...nothing – animate or inanimate – can enter an ecosystem without influence. ... The passage of a million tourists through Kenya's national parks may seem harmless, but it is a profound influence whose complexities are beyond us to describe.'[105] Vogler argues that '...it may be that a concentration on states misses the point. Global regimes, like any other regimes, involve human social interaction.'[106]

13. Toward a conclusion

The problem outlined in this article is that many current international instruments dealing with the protection and conservation of biodiversity suffer from a significant weakness in that they tend to focus too narrowly on species in isolation, or on only certain aspects of multi-species protection. It is suggested that this is largely a legacy of poor historical understanding of the optimal ways to conserve biodiversity. This is not a point that has gone unnoticed by modern commentators. In fact, on both sides of the divide between those who seek greater protection of species and those who seek greater use, there is today at least some recognition that species should not be seen in isolation.

Using one of the most contentious of all international debates – commercial whaling – as an example in order to conclude this article; in the ICRW it has been suggested on occasion that the CBD might be used to bring the opposing parties

[103] C. D. Stone, 'The Convention on Biodiversity', *supra* note 87, at 121.
[104] Art. 8.
[105] I. Parker, *What I Tell You, supra* note 76, at 397-398.
[106] J. Vogler, *The Global Commons: Environmental and Technological Governance* (2nd ed, John Wiley & Sons, 2000) 219-20.

closer together. In 2003, for example, the Russian Federation argued that 'whale conservation could be given high priority under the framework of the Convention on Biological Diversity (CBD)'.[107]

In the 1970s and 1980s, if a protagonist at the ICRW were to refer to taking a 'conservationist' or an 'ecological' approach, it would be understood at once that the speaker was against whaling.[108] In recent years, however, pro-whaling members of the IWC have adopted a similar argument to support moves to resume commercial whaling. Komatsu and Misaki, for example, write that:

> '... in recent years we have gained knowledge of the serious problem in the human fishery that is caused by whales' consumption of great amounts of fish in the ocean ecosystem. It is calculated that whales consume three to five hundred million tons of fish per year, amounting to the equivalent of three to five times per year (about one hundred million tons) as much fish as that taken by people. On the other hand, the Japanese fishing production has been reduced to a half of what it was 20 years ago. There is a strong case that over-protection of whales is causing detriment to the Japanese fishery. In greater perspective, this shows that unilateral protection of an animal at one level of the food web causes great damage to the ocean ecosystem.'[109]

Freeman argues that '...all fishery regulatory bodies will ultimately adopt an ecosystem approach to management. This approach will compel them to address the predatory impacts caused by growing whale populations that, in some cases, are known to be increasing at rates greater than 10 percent annually.'[110]

This disputed territory – where both the pro- and the anti-whaling blocs have seized on the 'ecosystem' approach as a term to support their positions – shows something of the complexity of the debate. At the 58th Annual Meeting of the ICRW in St Kitts and Nevis in 2006, for the first time for many years the pro-whaling bloc managed to win enough support to pass a Resolution: the so-called St Kitts and Nevis Declaration.[111] One of the paragraphs in the Declaration reads as follows:

[107] IWC Chairman's Report of the Fifty-Fifth Annual Meeting' (16-19 June 2003) 9. On this, however, Mexico responded that it did not believe that this would an 'appropriate alternative since the CBD does not have competency over cetaceans, unlike the IWC'; and that not all IWC members are party to the CBD. IWC Chairman's Report of the Fifty-Fifth Annual Meeting (16-19 June 2003) 10.

[108] See, for instance, Patricia Birnie, *International Regulation of Whaling, supra* note 32, at 613.

[109] M. Komatsu and S. Misaki, *Whales and the Japanese, supra* note 64, at 7-8.

[110] M. M. R. Freeman, 'Culture-Based Conflict in the International Whaling Commission: The Case of Japanese Small-type Whaling' in W. C. G. Burns and A. Gillespie (eds), *The Future of Cetaceans in a Changing World* (Transnational Publishers, 2003) 33-64 at 33.

[111] IWC Resolution 2006:1 St Kitts and Nevis Declaration; available at <http://www.iwcoffice.org/meetings/resolutions/resolution2006.htm> (visited June 2006).

> ACCEPTING that scientific research has shown that whales consume huge quantities of fish making the issue a matter of food security for coastal nations and requiring that the issue of management of whale stocks must be considered in a broader context of ecosystem management since eco-system management has now become an international standard.[112]

This paragraph arguably shows the pro-whaling bloc trying to turn to their advantage the concept of an 'ecosystem-based' approach, in order to argue that whales – as the top predator, and as a species not utilized by humans – have become so numerous that they are competing with humans for a food source. It does stand to reason that preserving the 'top predator' in an ecosystem will inevitably lead to competition, where humans are consuming the other resources in the ecosystem. To the present writers' mind, a difficulty with this argument is that its makers do not appear to wish to take *less* fish, but rather to take more whales in addition to fish stocks. This means that it is not a true understanding of the ecosystems in which whales operate that is being sought.

Opponents of increased whaling might argue that the real problem is that humans are not fishing sustainably – after all, whale numbers (when one looks at all species, and not simply at minke whales which were never subject to the sustained hunting efforts that led to the collapse of the other great whales) have declined drastically. A problem with this argument, of course, is that states from the anti-whaling bloc are amongst those fishing for species other than whales – even in so-called 'whale sanctuaries'. As such, they are contributing to the rise in whale numbers and the drop in fish stocks argued for by the pro-whaling states in the IWC.

14. Conclusion

What makes it so difficult to negotiate a *via media* between the competing claims is that no party claims – or admits – to caring little about the preservation of biological diversity and species numbers. Rather, all protagonists claim to care deeply about both of these aims; and to insist that their paths represent the best way to achieve them. The same points made for the commercial whaling debate can be made about many other environmental issues – such as trade in hardwoods from tropical forests, trade in elephant ivory, global warming and carbon trading, agricultural exports, and so forth.

In final conclusion, the present writer would like to suggest that it is absolutely imperative that we understand far more than we presently understand about the complexities of biological diversity and species interrelations – before taking drastic decisions. The consequences are too important – and the potential to do irreparable

[112] *Ibid.*

harm too great – for hasty decisions. Many of our most important multilateral environmental agreements suffer from the legacy of the species-based, categorization, approaches which were taken in earlier treaties; and these problems can be solved neither by an optimistic – or arrogant – assumption that we currently understand the complexities of biodiversity, nor by states deliberately arguing for interpretations that are to their advantage.

Protecting biodiversity in the Ukhahlamba Drakensberg Park World Heritage Site

Roger Porter[1]

1. Introduction

1.1 Background

Nature Conservation planning in the KwaZulu-Natal (KZN) Province of South Africa essentially began in 1895 in the British colony of Zululand, and then subsequently in the British colony of Natal. The first protected areas were established at that date; being St Lucia, Hluhluwe and iMfolozi Game Reserves. The three were proclaimed in April of 1895. The Natal Parks Board, the predecessor to KZN Wildlife, was established in 1947 in terms of provincial legislation, nature conservation was a provincial competence in terms of the then Constitution of South Africa. Between 1910 and 1947 there were several authorities that dealt with, or were responsible for, biodiversity conservation at provincial level. Given the homeland government situation in apartheid South Africa;[2] the KwaZulu homeland established a Directorate of Nature Conservation, which was then responsible for a number of protected areas in KwaZulu. However, post-1994, a process to amalgamate the two conservation agencies was undertaken. By 1997 the Ezemvelo[3] KZN Wildlife was established with a KwaZulu-Natal Nature Conservation Board and Nature Conservation Service. It is a parastatal organization falling under the Minister of Agriculture and Environmental Affairs for the province of KwaZulu-Natal, and is marketed as Ezemvelo KZN Wildlife (EKZNW). The KZN Nature Conservation Management Act 9 of 1997 established the two bodies. In provincial law the Board

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[2] In terms of the Bantu Authorities Act 68 of 1951 and the Promotion of Bantu Self-Government Act 46 of 1959, provision was made that all persons defined as 'Black' in terms of then-existing legislation ceased to be citizens of South Africa, becoming instead 'citizens' of nominally independent 'homelands'. KwaZulu (meaning 'the place of the Zulu') was one such homeland.

[3] 'Ezemvelo' is a Zulu word meaning 'environment'.

is a juristic person; the service undertakes the work of the Board.[4] The organization is headed by a Chief Executive Officer, who is the accountable person, and it is split into three main clusters: biodiversity conservation; commercial operations, which handles all the tourism facilities; and corporate services, which deals with matters of administration, finance, human resources and personnel, etc. [5]

1.2 The legal instruments which govern environment and nature conservation

At a national level, there is the National Environmental Management Act[6] which puts in place the principles for environmental management; and within that are the Regulations for environmental impact assessment. Under that umbrella legislation fall two other very important pieces of legislation: the first is the Protected Areas Act,[7] which deals at the national level with the whole system of protected areas governance in the country and therefore with how protected areas are to be proclaimed, established and managed. The Biodiversity Act,[8] brings into South African law much of the Convention on Biological Diversity[9] and how it is to be safeguarded and used sustainably. Another important piece of legislation is the National Heritage Resources Act,[10] which deals with cultural heritage that may also present inside protected areas and how that is to be protected. Internationally, there are a number of relevant Conventions; such as the Convention on Biological Diversity; the World Heritage Convention;[11] and the Ramsar Convention,[12] which protects wetlands of international importance. The uKhahlamba-Drakensberg is a designated Ramsar site, this recognition preceded its inscription as a World Heritage Site.[13] This mountain area is the most important water catchment in South Africa. These wetland systems are in a pristine state and there is a wide diversity of wetland types present.

1.3 Governance structures

The mission of the Nature Conservation Service is to ensure effective management and sustainable use of KwaZulu-Natal's biodiversity and protected areas in collabo-

4 This situation is being reconsidered. The Natal Parks Board model was not this, it was all one; the intention in the future, through amended legislation, is not to have two separate bodies.
5 See <http://www.kznwildlife.com> generally.
6 Act 107 of 1998.
7 National Environmental Management: Protected Areas Act 57 of 2003.
8 National Environmental Management: Biodiversity Act 10 of 2004.
9 Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, <http://www.biodiv.org>.
10 Act 25 of 1999.
11 Convention concerning the Protection of World Cultural and Natural Heritage, Paris, 16 November 1972, in force 17 December 1975, 11 *International Legal Materials* (1972) 1358, <http://www.unesco.org/whc/world_he.htm>.
12 Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 February 1971, in force 21 December 1975, 11 *International Legal Materials* (1972), 963, <http://www.ramsar.org>.
13 Countries designate their own Ramsar sites; whereas World Heritage Sites may only be inscribed on UNESCO's World Heritage List by agreement of the World Heritage Committee.

ration with people. EKZNW has a vision to be a world-renowned leader in the practice of biodiversity conservation and protected area management. It has much work still to do; mostly concerning issues around transformation, efficiency and conservation effectiveness.

EKZNW has a number of strategic goals; fundamentally it is about conserving indigenous biodiversity, both within and outside of the protected area system in the province; and to contributing to the Provincial Government's growth and development strategy. Clearly, EKZNW wants, as a goal, to foster and partner communities to value biodiversity and share in its benefits. It is also about maximizing opportunities from commercial and conservation operations with other stakeholders. Certainly, these financial resources are needed to undertake our work to protect biodiversity. Further, to manage these protected areas so as to achieve sustainable development and particularly the promotion of nature-based tourism within our protected areas.

1.4 Location

The uKhahlamba-Drakensberg Park World Heritage Site is located in the province of KwaZulu-Natal with the Kingdom of Lesotho lying to its West. It is split into two parts: the smaller Northern piece; and a gap between this and the much larger Central/Southern area.

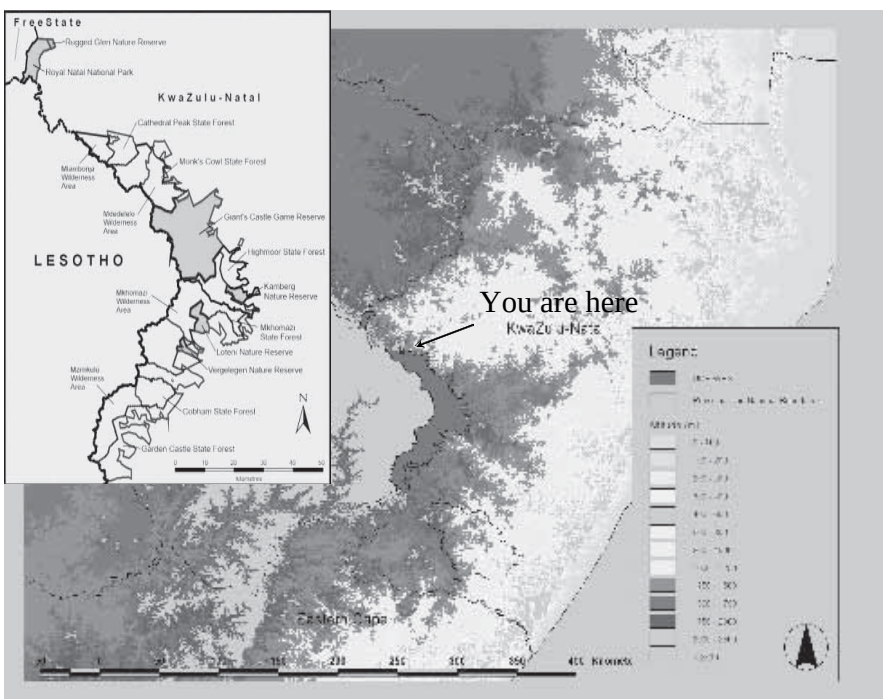

Figure 1: Location of the Ukhahlamba Drakensberg Park World Heritage Site showing the altitudinal gradients, with an inset map showing component areas set aside in terms of National and Provincial legislature.

The darker areas on the inset map are those areas which were set aside under provincial legislation; whereas the lighter areas are State Forest areas that were set aside in terms of the Forests Act.[14] Within those areas are proclaimed wilderness areas covering approximately 50% of the total area of the State Forests. The area of the World Heritage Site is in the order of 240 000 hectares; and the very first area which was established as a protected area was Giant's Castle Game Reserve[15] which was established during the Natal colonial period and was proclaimed in 1903. This mountainous region is situated at the most spectacular part of the great Eastern Escarpment of South Africa. It runs from its Northern point at the Victoria Falls, on the border between Zimbabwe and Zambia; it then travels Eastward and then Southward through the highlands of Zimbabwe; the escarpment in Mpumalanga, (a North-Eastern province of South Africa) the Drakensberg in KwaZulu-Natal; and then Southwards into the Eastern Cape province.

2. World Heritage Site status

2.1 General

At the time of the visit to the area by the 3rd UNEP/University of Joensuu course,[16] there were 24 mixed World Heritage Sites globally – a mixed site, in terms of the World Heritage Convention, contains both natural and cultural heritage of outstanding universal value.[17] The uKhahlamba-Drakensberg Park was listed by the World Heritage Committee on the 29th of November 2000.[18] The process of preparation of the nomination proposal took about three years. It was listed on the basis of two natural criteria: the first being that the site contains superlative natural phenomena and natural beauty, so that on the aesthetic criterion its importance was recognized to be of outstanding universal value; and secondly it is a site that contains some of the most important and significant natural habitats for the conservation of biological diversity, including many threatened and endemic species. The bearded vulture, listed among the endangered species, is an icon of this World Heritage Site and also for a future transfrontier park.

[14] The Forests Act 122 of 1984; since superseded by the National Forests Act 84 of 1998.

[15] See <http://www.kznwildlife.com/giants_dest.htm> (visited 30 May 2007) and <http://www.unep-wcmc.org/sites/wh/draken.html> (visited 30 May 2007), generally.

[16] June/July 2006.

[17] See <http://whc.unesco.org/en/list> generally. On 28 June 2007 UNESCO's World Heritage Committee inscribed a 25th mixed site – the Ecosystem and Relict Cultural Landscape of Lopé-Okanda in Gabon; see <http://whc.unesco.org/en/news/359> (visited 4 July 2007). There are now 851 sites on the List, in 184 States Parties: 660 being cultural sites; 166 being natural sites; and 25 being mixed; see <http://whc.unesco.org/en/list> generally.

[18] See <http://whc.unesco.org/en/list/985>; listing reported on 30 November 2000.

Figure 2: Showing the Thukela (the largest river in Kwa-Zulu Natal) with the spectacular 'Amphitheater' of the Royal Natal National Park section of the uKhahlamba Drakensberg Park in the background. Photo: <http://www.kznwildlife.com/mountains_dest.htm>.

2.2 The natural criteria of outstanding universal value

The greatest richness and diversity of the area is with respect to the plants: there are over 2 500 species of plants, and with an extraordinary high degree of endemism. The area is recognized as a Vavilov Centre that is a centre of endemism, where new species continue to evolve. It is an ongoing process in nature; which can be geographically or spatially determined on the basis of the degree or amount of endemism. It also has a large number of mammal, amphibian, reptile, and bird species present. Amongst the bird species there are also a large number of endemic species. The bearded vulture is interesting because this is the only population of this species in the Southern Hemisphere. Other populations are in the Ethiopian Highlands, the Alps, the Himalayas, and the Pyrenees. The species is as endangered, or at least threatened, in other parts of the world as it is in South Africa.[19]

[19] *Gypaetus barbatui.* See, e.g. <http://www.ewt.org.za>; <http://www.nwf.org/nationalwildlife/article.cfm?issueID=109&articleId=1376>; <http://wwf.panda.org/about_wwf/what_we_do/species/about_species/species_factsheets/bearded_vulture/bvulture_population_distribution/index.cfm>; and <http://ec.europa.eu/environment/nature/directive/birdactionplan/gypaetusbarbatus.htm> (all visited 30 May 2007).

The scenic splendour in these mountains is encapsulated in the contrast between the winter's snows and the summer's lush green grasslands. It is a very rugged terrain with high cliffs, gorges and deep valleys, but a beautiful countryside; and special in that it is a grassland mountain system. Most of the mountain ranges on our planet are forested and many South Africans see grassland mountain systems as fairly 'ordinary' but globally however, this is not the case. It is an area of remarkable geology and geomorphology. Its geology is very closely related to the fragmentation of the ancient continent of Gondwana; at the time when India, Antarctic and Australia split off from Gondwana. It was the last split approximately 65 million years ago during the Jurassic period that allowed for the formation of this escarpment, with huge outpourings of basaltic lavas in four or five episodic events that built the basalts to an estimated depth of over 2 000 meters. These lavas flooded over the earlier Karoo system formations; and in the period since the breakup of Gondwana, over the last 60 million years or so, this escarpment has eroded back approximately 100 kilometers from its coastal position to its current position. You can stand and view the mountains before you, and see an uninterrupted geological history spanning a period covering the last 230 million years.

The different geological formations lie in a tabular formation and are clearly evident. The sandstone or Clarens formation is rock that was sand which has been consolidated because of the heat of the basalt lava that was placed on top of it. This was at a period of time when the area was covered by extensive sand dune fields, much as we could view the Sahara today. In the inter-dune troughs vegetation and water occurred and, associated with this, are a whole lot of fossil remains of the plants and animals relating to the dinosaur period.

Below these sandstones is the Eliot formation. Much of the protected area coincides with the Eliot, Clarens sandstones and the basalts. Sandstones are very important because these rocks provided the canvases for the San rock art painters. The reason how the overhangs and caves were therefore formed was that the heat and mass of the basalt was from above; the harder sandstones were therefore formed at the top; and the sandstones that are more prone to weathering and wind erosion are below.

These escarpment areas have a high water production value relative to the rest of the country. Its inland location is highly significant in driving the economy of our country; in that South Africa is, by and large, a dry country with very scarce water resources. The water from this escarpment is not only critical to the economy of the country, but also to sustaining life in the region.

2.3 The cultural criteria of Outstanding Universal Value

The whole principle of cultural heritage, wherever it is on our planet, is that cultural heritage evolved in the natural environment that was prevalent at the time. It is only much more recently that we have seen cultural heritage developing in artificial

circumstances, which in the major cities and so on. From an archeological point of view, that cultural heritage definitely developed a survival-based strategy in a close relationship with nature and the natural environment. This is exemplified by the San people through their rock art; and its spiritual significance.[20] This was recognized in the listing of the Park as a World Heritage Site. Also, there is recognition that, generally in terms of rock art, possibly the highest cultural expression world wide was by the San people. Their art takes rock art to a level arguably far greater than that done by Aboriginals in Australia or Red Indians in America.

In terms of the cultural criteria, the San rock art represents a masterpiece of human creative genius. Secondly, it is recognized that it bears a unique and exceptional testimony to a cultural tradition which has disappeared. These are two criteria set by the World Heritage Convention; are the criteria in terms of which this particular site was also listed.

The area has the highest density of San rock art sites known. We are aware of over 600 recorded sites that are registered and listed on our database. It is the largest known concentration of paintings by the San people with over 35 000 images. The quantity of the sites is high and the diversity in terms of the subjects of the paintings and the painting locations is also remarkable. This rock art was painted over a period of about 4 000 years; and, uniquely, up until approximately 100 years ago. It therefore differs enormously from other San rock art sites in Africa.[21]

The paintings were done with hairs, fibrous brushes, sticks, and perhaps feathers. The paint, in most cases, was made of ochre. A powder made from rock particularly where there has been oxidation of its iron content to form colours ranging from deep red to orange and yellow. Charcoal was used to give black colour; and the white came from bird droppings and white clay and is the most ephemeral of the colours used. The paint was mixed with other substances, which are not clearly known; it is suspected that there were fats and plant substances, and that certain body fluids might have been added in order to add to their spiritual significance.

The San people, historically, were forced out of the area; and since about the 1860s were hunted and massacred by people who moved into the area. Initially, we believe, by the Bantu peoples; and then the European settlers who came into the area. Indigenous animals were hunted by these settlers, possibly producing food scarcity; while the new settlers brought with them domestic animals. The concept of ownership of animals was not recognized in the culture and the heritage of the San people; and they resorted to hunting the domestic animals for food given a possible scarcity of indigenous animals. Conflict therefore arose; as the owners of these domestic animals took revenge and retribution, by persecuting the San people.

[20] See <http://www.kznwildlife.com/mountains_cult.htm>.

[21] See <http://whc.unesco.org/en/list/985> and <http://www.kznwildlife.com/mountains_cult.htm generally> (visited 30 May 2007).

It has been learned subsequently that some of these people went into hiding; and that they married into some of the Bantu people occupying areas near the mountains. The white colonialists moved populations of black peoples into areas between the mountains and their settlements in order to form a buffer or barrier, a policy which was carried out over a number of years. That is why one had, during the apartheid era, black homeland areas situated in the proximity of the Drakensberg; such as the upper Thukela Location.

Importantly, too, one can sit within one of these overhangs or shelters with the rock art around you and look out across the landscape and see it in as exact, and pristine form with its animal life the same as the artist saw it when those paintings were created.

Figure 3: This painting of a dying male eland antelope and an anthropoid figure allowed for new interpretation of San Rock Art generally, leading to better understanding of its cultural significance and value.

A particular painting (Figure 3) of a dying eland antelope and an anthropoid figure has been termed the 'Rosetta Stone' of San Rock Art; [22] as it was this painting that provided the key to unlocking the significance and understanding of the San Rock Art in Africa. The anthropoid figure is considered to represent a shaman, (or a spiritual 'medicine man,) in what is thought to be a trance state. The shaman, has a head that is like that of an antelope; the figure has hooves, it is attenuated and elongated.

[22] See, for instance, <http://www.kznwildlife.com/kamberg_rockart.htm> (visited 30 May 2007).

The figure is holding the tail of the dying eland indicated by the legs of the eland being crossed, and the head of the animal is lowered. It is believed that the painting signifies that the dying eland is giving up its spiritual forces to the shaman. What is more, the eland depicted is a male animal, as can be seen by the size of the dewlap in particular. This is significant as the male animal is larger than the female and also carried more fat. It was the fat that the San recognized as containing spiritual power. In San culture, particularly in the Drakensberg area, the eland was regarded as the most powerful spiritual animal; partly because of its size, and amount of fat. Also, it occurred in these mountains in relatively big herds; a feature which can still be seen today.

With the livestock raids, and the retribution taken by the settlers, the San people are believed to have become extinct in the Drakensberg area by about the late 1800s to early1900s. Small numbers appear to have lived on in secret, as a hidden people. It was only after the area was declared a World Heritage Site in 2000, and following South Africa's transition to a democratic country in 1994, that their culture and the descendants have emerged.

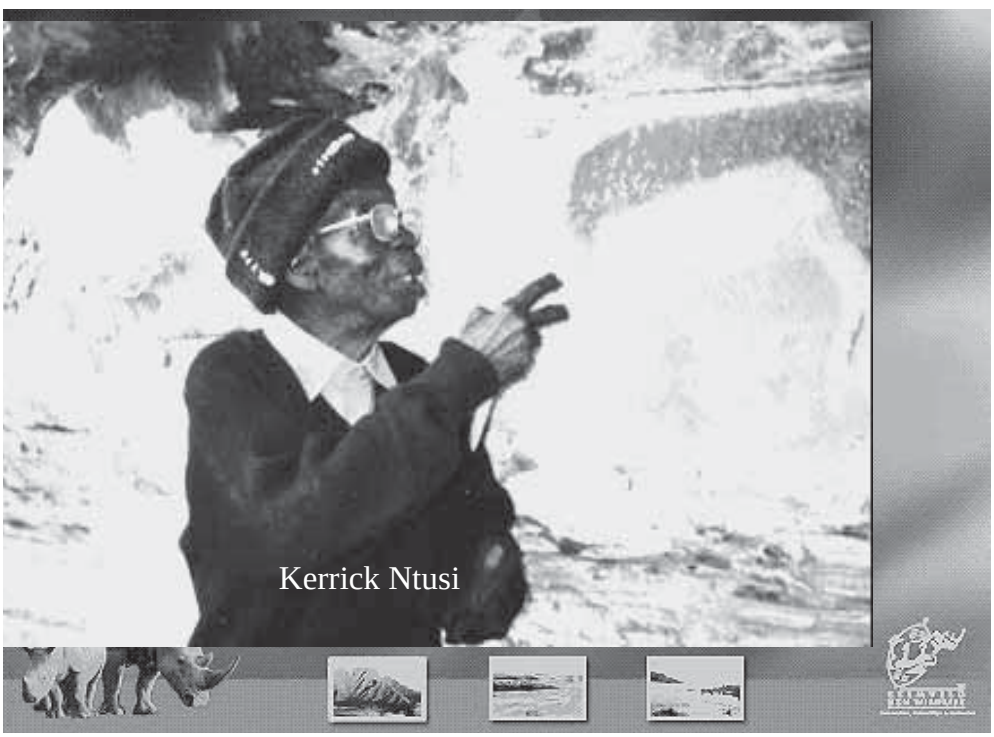

Figure 4: The picture is of Kerrick Ntusi, who is estimated to be about 95 years old, and is a San descendant. He was still alive as recently as 2005.[23]

[23] See, for instance, <http://samilitaryhistory.org/4/d04decne.html> (visited 30 May 2007); and <http://www.genealogyworld.net/archive/feb05.html> (visited 30 May 2007). The name 'Kerrick' is onomatopaeic; derived from the sound made when tightening a leather stirrup strap on a saddle.

Some San descendants made contact with the anthropologist Franz Prins; who had been appointed by the Maloti-Drakensberg Transfrontier Project to work on the cultural heritage and, in his work and investigations, he became aware of some of the history and culture of these people. Near the Kamberg section of the World Heritage Site, there is a family known as the Dumas who are San descendants. They retain some of their historical cultural and spiritual ceremonies that had been passed down in secret through the generations. The number of San descendants that remain in the area is unknown.

2.4 Management of the World Heritage Site

In South Africa there are the national Protected Areas Act,[24] and the World Heritage Convention Act[25] that require management authority to put in place a management plan – referred to as the Integrated Management Plan (IMP). The IMP defines the purpose of the protected area, its vision, its significance, and its management objectives. As such the IMP puts in place the management principles for a five-year period; it also allows for annual budgeting, and programmes for various management interventions to be developed and resourced. The IMP comprises four main components: the first is the management of the natural and cultural resources of the World Heritage Site; the second is a development plan, in other words what additional management infrastructure and visitor facilities are needed; the third is a business plan, which is about resourcing management and development; and, finally, a strategic plan which pulls the other three components together. The management programmes are defined in the IMP, such as that for the control of alien invasive species; the security of the protected area, particularly as this park is on an international border; management of the cultural resources; and, in addition, allows for research and monitoring to be undertaken.

A Park cannot, however, exist as an island in isolation and it is essential that the Park is supported by the public and other stakeholders. This means that building support at all levels, from local to the highest political levels, becomes critically important. The Park also has to be relevant to the area in which it is situated; and it therefore has to be integrated into the municipal plans, especially as the Integrated Development Plans of municipalities include the responsibility of providing services to the Park.

The focus of management is to ensure that benefits flow across the boundaries of the Park; that people have access to cultural sites; that harvesting of the natural products on a sustainable basis takes place; and that the communities participate in various events. There is also a system which allows for the establishment of a community levy, the funds raised going into a Trust. People entering the Park or staying overnight contribute to the levy and the beneficiaries of the Trust Fund are the communities that live adjacent to the Park. Annually, projects are defined and financial

[24] Act 57 of 2003.
[25] Act 49 of 1999.

assistance is given to projects that are jointly identified. These projects have included putting roofs on schools; establishing and building clinics; building bridges; and so forth.

Local people, however, also need to be involved in the decision-making and management of the Park and the provincial Act (the KZN Nature Conservation Management Act) allows for the establishment, too, of what is called 'local boards'. Our Minister, the Member of the Executive Council for the Province, appoints the members of the local board after having received nominations. The people appointed then become involved in advising on the management of the Park. In addition, there are a number of 'community forums' which discuss and try to find solutions to matters of concern that are of particular relevance to either the community or the management of the Park; and also allow for consultation in terms of both the adoption of, or processes leading to the adoption of, the Integrated Management Plan and/or other developments proposed for the area.

3. The Maloti-Drakensberg Transfrontier Park

In acknowledgement that the Park[26] contains biodiversity of global importance, that it is situated at an international boundary, and that it provides an opportunity to foster better international relations between South Africa and the Kingdom of Lesotho, the Maloti-Drakensberg Transfrontier Conservation and Development Project was established. This has been a project partly funded by contributions from the Global Environment Facility (with the World Bank acting as the implementing agency);[27] via a grant over the last five years. The project comes to an end in 2007, in terms of the funding. That is the first phase, which has largely been a planning phase. The project now moves into Phase Two, which is an implementation phase. The World Bank provides 'top up' funding; to each province and South African National Park contributions to the funding of the project. In terms of the South African component, Phase Two will be self-funded – it is about the various implementing agencies, at government level in particular, taking responsibility and implementing the plans prepared in the first phase. Lesotho, will be seeking donor funding, including from the World Bank for Phase Two.

The major product that is arising from the collaborative work by the two countries is a '20-year Strategy' and a '5-year Action Plan' The 20-year Strategy is well advanced; it is a bilateral strategy, and therefore requires much hard work by way of negotiation and discussion between representatives from each country working on the project.

[26] See <http://www.kznwildlife.com/mdtp_dest.htm> (visited 30 May 2007); <http://www.environment.gov.za/NewsMedia/MedStat/2001june11/MalutiSigning_11062001.htm> (visited 30 May 2007); and <http://www.theta.org.za/intac/index.asp?thepage=sites/maluti.htm> (visited 30 May 2007) generally. The Park was established on 11 June 2001.

[27] See <http://www.kznwildlife.com/mdtp_dest.htm> (visited 30 May 2007).

As the Strategy is currently in the Draft Phase, it is the two Project Coordinating Units (PCUs) – staff appointed on contract to work on the project – who are essentially undertaking the work. In essence it is bioregional planning initiative. The two PCUs come together in a series of workshops. The format and the vision are agreed on; and then the detailed contents of the strategy are developed. This has all emerged from the data and information collected and housed in a GIS database over the last five years or so. This determines where one would need to expand the current protected areas, or what the circumstances and needs of communities around these protected areas are; where certain interventions should be focused; and so forth. Other important questions are how to put in place a tourism development plan that is transfrontier, establishing a transfrontier park; and what the institutional arrangements in each country would need to be. At the moment, Lesotho does not have a nature conservation agency. That has meant drafting new legislation, dealing with biodiversity conservation and institutional arrangements for Lesotho. Lesotho has considered the South African Protected Areas Act,[28] and other relevant legislation; and has drafted the new Act in the light of the South African conservation law experience. It is now a matter of the Government of Lesotho passing that legislation.

An important step in the process in developing the 20-year strategy has been stakeholder consultation. Stakeholder workshops have already been held but the process requires a huge commitment in time, as these workshops usually take more than two days. The workshops give focus and direction and, broadly, a stakeholder mandate and therefore 'buy-in'. Clearly, this process must then be taken onto the political level. Once the 20-year Strategy is in place and adopted, we can then focus on developing the Action Plan. We have a process defined to obtain the political support from both countries and a function has been arranged that coincides with the tenth anniversary of the Giant's Castle Declaration.[29] That Declaration was visionary; in that it set in place what we have achieved over the last ten years. There are hopes to have the Ministers of the two countries signing the Joint Management Plan for the area; signing a Memorandum of Agreement for Phase Two (the original Memorandum of Agreement now being outdated); and the adoption of the 20-year Strategy.

The Maloti-Drakensberg Transfrontier Project was formulated in a Preparatory Phase; funded partly by the World Bank, as well as by South Africa and Lesotho. The listing of the uKhahlamba-Drakensberg as a World Heritage Site was critical in getting the support of the World Bank in going forward to start with Phase 1 of this Transfrontier project. There are two main project objectives: the conservation of globally significant biodiversity (evaluation of the current protected area system, its possible expansion, improving management effectiveness, particularly range management, of natural areas in the high mountains etc) and secondly to contribute to community development and sustainable livelihood opportunities (including capacity-building, sustainable use of the cultural and natural heritage resources etc.).

[28] Act 57 of 2003.

[29] See <http://www.unep-wcmc.org/sites/wh/draken.html> (visited 30 May 2007).

4. Complexities and challenges

There is great institutional complexity in this area. The transfrontier project has to contend with two countries; three districts in Lesotho; three provinces in South Africa; five district municipalities; twelve local municipalities; more than 100 wards; three ethnic groups (Sotho, Zulu and European – not including the numerically insignificant San groups, which would fall under either Zulu or Sotho); one and a half million people; a land tenure system of three types (state, private and communal). The protected area categories are nature reserve, national park (Golden Gate National Park), and state forest. There are six primary land use types: conservation, rural agriculture, plantation, forestry, extensive and intensive agriculture, and urban areas.

However, what is important is to ensure that this World Heritage Site is proclaimed in terms of the World Heritage Convention Act; its buffer zones defined; and the conditions and regulations with respect to these buffer zones put in place. Inappropriate developments, for example industrialization, intensive agriculture, intensive afforestation, and inappropriate resort development, must not take place and cause damage to the outstanding universal values of the World Heritage Site. The mountain area is too sensitive for these types of land-use. Also, all of these land uses can have severe impacts on the sustainability and quality of the water resources that contribute significantly to the economy of South Africa.

5. Conclusion

This paper has sought to present some of the complexities surrounding the protection of biological diversity found within and adjacent to a mountain World Heritage Site which also lies within a transfrontier context between two developing countries. The importance of the Site's heritage, both cultural and natural, and the fragility of the Site, make it imperative that these complexities are dealt with through a five year action plan as a component of 20-year strategic plan of implementation that ensures the conservation of both the natural and cultural resources while at the same time address and contributes to sustain livelihoods of the people of the region.

Part IV

Interactive Exercises

Simulating Negotiations on Access to Genetic Resources and Benefit-sharing (ABS)[1]

Brook Boyer[2]

An important and practical component of the 2006 Training Course on International Environmental Law-making and Diplomacy was a full-day exercise simulating an informal working group on Access to Genetic Resources and Benefit-sharing.

The exercise aimed to expose the training course's participants to the real-world complexities and dynamics of multilateral environmental negotiations, as well as to policy connections between biodiversity, trade/intellectual property rights, and development objectives. The exercise was developed by the United Nations Institute for Training and Research (UNITAR) in 2004 and then revised in 2006 with support from the United Nations Environment Programme (UNEP). The exercise's mandate, information and background note have been reprinted in this volume.

The simulation includes information on the scenario and expected outcome of the working group, and a background note providing an overview of the evolution of ABS since the adoption of the Convention on Biological Diversity. The exercise also includes role instructions for 22 Member States and one non-paper providing a basis on which the working group may begin discussions. Although the exercise places participants in the context of the on-going negotiations as a follow-up to the

[1] The Negotiation Simulation Exercise on Access to Genetic Resources and Benefit-sharing is for educational use only. The scenario mandate and role instructions in this simulation are entirely hypothetical and do NOT represent any official policy or positions of the Convention on Biological Diversity, its Parties, the United Nations or any of the other organizations mentioned. Tatiana Terekhova and Jan Eckendorf drafted the exercise under the supervision of the Multilateral Diplomacy and International Affairs Management Programme, United Nations Institute for Training and Research (UNITAR). This version of the exercise was revised by Arun Seetulsingh with financial assistance provided by the United Nations Environment Programme (UNEP) and the University of Joensuu. Please do not cite or refer to the exercise without explicit written approval from UNITAR. It may not be used, reproduced, revised, or translated in whole or in part by any means without written permission from UNITAR. (<http://www.unitar.org/diplomacy>).

[2] Dr., Senior Programme Officer, UNITAR.

Eighth Session of the Conference of the Parties to the CBD, the exercise's purpose is purely educational.

Mandate of the Informal Working Group on Access to Genetic Resources and Benefit-sharing

The Seventh Conference of the Parties (COP 7) to the Convention on Biological Diversity (CBD) mandated the *Ad Hoc Open-ended Working Group on Access and Benefit Sharing* to elaborate and negotiate an international regime on ABS. In 2006, the Eighth Session of the COP instructed the Ad Hoc Open-ended Working Group to complete its work on the elaboration and negotiation of the international regime 'at the earliest possible time before the tenth meeting of the Conference of the Parties', scheduled for 2010.

In preparation for the Fifth Meeting of the Ad Hoc Open-ended Working Group on ABS, scheduled for January 2007, Canada and Colombia (the co-chairs) have invited the participants of the simulation exercise to participate in an *Informal Working Group* to discuss the nature, scope and elements of a possible international regime on ABS (elaborating on the terms of reference agreed at COP 7 and on the basis of the ABS-4 Outcome Document).

The objective of this informal working group is to facilitate discussions and forge consensus on a number of points before the Ad Hoc Open-ended Working Group on ABS reconvenes for its fifth meeting in January 2007. The expected outcome of the Informal Working Group should be in the form of recommendations to ABS-5.

The co-chairs have identified the following issues for discussion:

Nature: Should the regime stand alone as an individual instrument, or be part of, or relate to, other legal (e.g. International Treaty on Plant Genetic Resources for Food and Agriculture - ITPGRFA, Trade-related Aspects of Intellectual Property Rights - TRIPS, World Intellectual Property Organization - WIPO, International Union for the Protection of New Varieties of Plants Convention - UPOV) and/or non-legally binding instruments (e.g. Bonn Guidelines, regional modal laws)? Should the regime be a legally-binding or non legally-binding international instrument?

Scope: What should be the scope of the regime? Should derivatives of genetic resources be included? To what extent, if any, should the regime address access and the equitable sharing of benefits arising out of the utilization of traditional knowledge? To what extent, if any, should the international regime take into consideration links to the other two objectives of the Convention (e.g. conservation and the sustainable use of biodiversity)?

Potential elements: What should be the key features of *prior informed consent* and *mutually agreed terms*? (E.g. consent of local and indigenous communities, role of national authorities and focal points, restrictions to access.) Should access agreements include compulsory or voluntary benefit-sharing arrangements? Should the regime provide monitoring and enforcement measures (certification systems, export/import controls, access to justice and dispute settlement)?

Informal Working Group on Access to Genetic Resources and Benefit-sharing
Background Note

1. Introduction

Access to genetic resources and benefit-sharing (ABS) concerns a broad range of stakeholders, including governments, intergovernmental organizations, nongovernmental organizations (NGOs), manufacturers, research and development firms, investors, and indigenous and local communities. The issue has evolved over the past 13 years to become the subject of a significant international policy debate involving a number of organizations and institutional forums. This background note traces the development and evolution of the ABS issue within the context of the intergovernmental negotiating process of the Convention on Biological Diversity (CBD).

2. Background of ABS in the Convention on Biological Diversity

The issue of access to genetic resources and benefit sharing was originally addressed within the framework of the Convention on Biological Diversity, which was negotiated under the auspices of UNEP, adopted in 1992 and entered into force on 29 December 1993. To date, 188 countries are Party to the Convention.

The Convention has three objectives (Article 1), the third of which states:

> 'fair and equitable sharing of the benefits arising out of the utilization of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding'.

In addition to Article 1 of the Convention, two provisions in the CBD also make reference to ABS: Article 15 provides a framework for implementing the Convention's third objective by recognizing *sovereign rights of states over their natural resources, access on mutually agreed terms and prior informed consent, and the development of legislative, administrative or policy measures by each party;* and Article 8(j) contains a

provision to encourage the equitable sharing of the benefits arising from the utilization of knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for conservation and sustainable use of biological diversity.[3] A number of crosscutting issues in the Convention also relate to the issue of access and benefit-sharing, including capacity building, information exchange, transfer of technology, and financial resources.

Initial Discussions: ABS and the CBD Conference of the Parties (COP)

Subsequent to the entry into force of the Convention, the issue of genetic resources arose for the first time at the second meeting of the COP in 1995, where Parties considered the compilation of '*existing legislation, administrative and policy information on access to genetic resources and the equitable sharing of benefits derived from their use*' (UNEP/CBD/COP/2/13). The COP adopted decision II/11, requesting the CBD Secretariat to further elaborate a survey of measures taken by governments to implement Article 15 of the Convention, including any national interpretations of key terms used in the article.

At its third meeting in 1996, the COP considered a compilation of views of the Parties on possible options for developing the implementation of Article 15 (UNEP/CBD/COP/3/20). In decision III/15, the COP urged governments to submit relevant information on possible elements for guidelines and other measures for the implementation of Article 15. Based on this and other COP 3 decisions, the CBD Executive Secretary called on Parties to submit case studies on ABS mechanisms.

In 1998, at COP 4, Parties discussed issues related to benefit-sharing, particularly measures to promote and advance the distribution of benefits from biotechnology, fair and equitable sharing of benefits arising out of genetic resources and options for measures to implement Article 15 on access to genetic resources. This was the first time in the COP process that benefit-sharing was addressed as a separate agenda item.

At COP 4, a proposal to establish a working group to create an international code of conduct, containing minimum standards for provisions and use of genetic resources was made by Switzerland and supported by France, while the African Group, Russia, Germany and other delegates favored the development of guidelines.[4]

[3] Developed from experience gained over the centuries and adapted to the local culture and environment, traditional knowledge is transmitted orally from generation to generation. It tends to be collectively owned and takes the form of stories, songs, folklore, proverbs, cultural values, beliefs, rituals, community laws, local language, and agricultural practices, including the development of plant species and animal breeds. Traditional knowledge is mainly of a practical nature, particularly in such fields as agriculture, fisheries, health, horticulture, and forestry. ABS, traditional knowledge, and folklore are often examined together.

[4] Summary of the fourth meeting of the COP to the CDB; *Earth Negotiations Bulletin*; Vol. 9 No. 96, 1998.

In decision IV/8, the COP established a regionally balanced Panel of Experts on access to genetic resources and benefit-sharing composed of governments, representatives from public and private sectors and indigenous and local communities. The Panel was instructed to draw upon all relevant sources in the development of a common understanding of basic concepts, and to explore all options for access and benefit-sharing on mutually agreed terms, including guiding principles, guidelines, and codes of best practice for access and benefit-sharing arrangements.

Panel of Experts on Access and Benefit-sharing

At its first meeting, in October 1999, the Panel of Experts considered access to genetic resources for scientific and commercial purposes; legislative, administrative and policy measures at the national and regional levels; regulatory procedures and incentive measures; and capacity building.

When discussing access legislation, experts agreed that it might be best to limit it only to genetic resources and not take into consideration derivatives. The Panel endorsed the importance of preparing national strategies on ABS as part of national biodiversity strategies prior to developing legislative, administrative and policy measures.[5]

Box 1: Article 27 of the Trade-Related Aspects of Intellectual Property Rights (TRIPS) Agreement

The TRIPS Agreement is Annex 1C of the Marrakesh Agreement Establishing the World Trade Organization, signed in Marrakesh, Morocco on 15 April 1994.

Art. 27 - Patentable Subject Matter

1. Subject to the provisions of paragraphs 2 and 3, patents shall be available for any inventions, whether products or processes, in all fields of technology, provided that they are new, involve an inventive step and are capable of industrial application. Subject to paragraph 4 of Article 65, paragraph 8 of Article 70 and paragraph 3 of this Article, patents shall be available and patent rights enjoyable without discrimination as to the place of invention, the field of technology and whether products are imported or locally produced.

2. Members may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is necessary to protect ordre public or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law.

[5] Summary report of the Experts' Panel on Access and Benefit-sharing; *Earth Negotiations Bulletin*; Vol. 9 No. 131, 1999.

> 3. Members may also exclude from patentability:
>   (a) diagnostic, therapeutic and surgical methods for the treatment of humans or animals;
>   (b) plants and animals other than micro-organisms, and essentially biological processes for the production of plants or animals other than non-biological and microbiological processes. However, Members shall provide for the protection of plant varieties either by patents or by an effective sui generis system or by any combination thereof. The provisions of this subparagraph shall be reviewed four years after the date of entry into force of the WTO Agreement.

The Panel developed general conclusions, which, among other issues, identified the concepts of prior informed consent (PIC) and mutually agreed terms (MAT) as the core requirements of effective ABS measures. Contractual arrangements, which should include provisions for benefit sharing, information needs and capacity building, were considered to be the principal mechanisms for concluding access agreements. The Panel of Experts also discussed at length issues of intellectual property rights (IPRs) and, in particular, the role of IPRs in PIC, traditional knowledge, and their integration in contractual agreements.

Fifth Meeting of the Conference of the Parties, May 2000

At its fifth meeting, the COP established an Open-ended *Ad Hoc* Working Group on ABS to develop guidelines and other approaches on PIC; MAT; roles, responsibilities and participation of stakeholders; aspects of *in situ* and *ex situ* conservation and sustainable use; mechanisms for benefit-sharing; and the preservation and maintenance of traditional knowledge. Decision V/26 of the COP also addressed *ex situ* collections[6] acquired prior to the CBD's entry into force, IPR and relevant provisions of the WTO Agreement on Trade Related Aspects of Intellectual Property Rights (TRIPS).

During the High-Level Segment at COP 5, Malaysia expressed concern that the provisions of the CBD and national efforts to safeguard biological resources would be adversely affected by the implementation of the TRIPS Agreement, and particularly by Article 27(3)(b), which requires patenting of certain biological resources. Malaysia's position was supported by the African Group, which called for patenting of life forms, including plants, animals, microorganisms and biological processes to be prohibited.[7]

One outstanding issue that did not receive sufficient discussion at COP 5 was the relationship between intellectual property rights (IPRs) and access and benefit-sharing arrangements. A number of developing country delegates expressed disappointment that COP 5 did not take the debate on IPRs any further.

[6] Article 2 of the CBD identifies *ex situ conservation* as the conservation of components of biological diversity outside their natural habitats. However *ex situ collection* is not defined by the CBD.

[7] UN biodiversity meeting fails to address key outstanding issues, Third World Network.

Second Panel of Experts on Access and Benefit-sharing, March 2001

The second Panel of Experts on ABS met in March 2001. The Panel produced a report and conclusions on user and provider experience in ABS processes, approaches for stakeholder involvement in ABS processes and complementary options to address ABS within the CBD's framework, including possible elements for the guidelines. The Panel's report and conclusions were forwarded as an input into the first meeting of the *Ad hoc* Open-ended Working Group on ABS.

First Meeting of the Ad hoc Open-ended ABS Working Group, October 2001

At the first meeting of the *Ad Hoc* Open-ended ABS Working Group (ABS-1) in October 2001, delegates developed the draft Bonn Guidelines (see below), identified elements for a capacity building action plan, called for an open-ended workshop on capacity building for ABS and considered the role of IPR in the implementation of ABS arrangements. With regard to IPRs, the Working Group stressed the need to look at the disclosure of the country of origin or use of traditional knowledge in patent applications. Delegates recognized the fundamental need to integrate the work of the CBD and the World Intellectual Property Organization (WIPO) with due respect for the specific mandates of each body.

Sixth Meeting of the Conference of the Parties, April 2002

One of the achievements of COP 6 in April 2002 was the adoption of the Bonn Guidelines on ABS. While discussing access and benefit sharing, Ethiopia and the Philippines, joined by many other developing countries, supported an internationally binding instrument on ABS, while other Parties, particularly the developed ones, emphasized the voluntary nature of the guidelines and non substitution for national legislation.[8]

Box 2: The Bonn Guidelines

The 'Bonn Guidelines on Access to Genetic Resources and Fair and Equitable Sharing of the Benefits Arising out of their Utilization' (Decision VI/24A) are voluntary and designed to assist governments and other shareholders to develop legislative, administrative or policy measures on access and benefit-sharing and/or in negotiating contractual agreements for access and benefit-sharing. The guidelines cover a range of subjects, including the role of national focal points and competent authorities, participation of stakeholders, the process of access and benefit including prior informed consent and mutually agreed terms, and an illustrative list of monetary and non-monetary benefits.

[8] Summary of the Sixth meeting of the COP to the CBD, *Earth Negotiations Bulletin,* Vol. 9 No. 239, 2002.

In the course of the discussions during COP VI, several countries – including India, Colombia, Jamaica and Peru – stressed that the guidelines should encourage countries to require the disclosure of the country of origin of the genetic resources and provide evidence of benefit-sharing and prior informed consent of traditional knowledge holders in patent applications, in the line with their position in the WTO TRIPS Council. In the end, requirements for IPRs were only included in the Guidelines as possible measures to support compliance with PIC and MAT provisions along with, inter alia, voluntary certification schemes and measures discouraging unfair trade practices.

Some civil society groups were critical of the Guidelines. The Third World Network stated that the Guidelines failed to define the rights of indigenous peoples, local communities and farmers, and to address conflict with the TRIPS Agreement. While pointing out that the Guidelines recognize the need to prevent biopiracy practices, Friends of the Earth International criticized Parties for failing to agree on the need for legally binding measures.

World Summit on Sustainable Development, September 2002

In September 2002, the World Summit on Sustainable Development (WSSD) underlined the unprecedented rate at which biodiversity is being depleted and acknowledged that this trend can only be reversed if the local communities benefit from the conservation and sustainable use of biological diversity, particularly in countries of origin of genetic resources, in accordance with Article 15 of the CBD. The WSSD Plan of Implementation calls for actions to negotiate, within the framework of the Convention on Biological Diversity, bearing in mind the Bonn Guidelines, an international regime to promote and safeguard the fair and equitable sharing of benefits arising out of the utilization of genetic resources.

Second Meeting of the Ad hoc Open-ended ABS Working Group, December 2003

The ABS Working Group convened for the second time in December 2003 and began discussions on the process, nature, scope, elements and modalities for an international ABS regime, as a follow-up to the recommendations of the Inter-Sessional Meeting of the Multi-Year Programme of Work (MYPOW), which was convened several months earlier in March 2003.

Most of the issues proved to be highly controversial and tended to reinforce cleavages between the developing countries, particularly those representing the African Group and the Group of Like-minded Megadiverse Countries (LMMC), and the developed countries, notably the European Community (EC), Australia, Switzerland and Canada. On virtually all agenda items, these two blocs held opposing views. The LMMC and the African Group favored accelerating discussions on an international legally binding ABS regime designed to redress the balance between access and benefit-sharing. They stressed that the ABS regime should ensure respect for national

sovereignty, promote compliance with PIC and be in conformity with MAT, address certification of the provenance of genetic resources, include the issue of derivatives and balance the regulatory burden on user and provider countries.[9] The African Group also underlined that the regime should promote technology transfer.

On the other hand, the EC, Australia, Canada, Switzerland and the Republic of Korea placed emphasis on the implementation of the Bonn Guidelines before entertaining discussions on the negotiation of an ABS international regime. Moreover, these countries stressed that discussions should build on the results and experiences of implementing the Guidelines. They also emphasized that ABS policies should be discussed in close coordination with existing policies in multilateral institutions, such as the WTO (the TRIPS Agreement), WIPO and International Treaty on Plant and Genetic Resources (ITPGR), rather than establish a new and separate legal instrument. Japan insisted against excessive ABS regulation.

The Working Group concluded with the adoption of a heavily bracketed draft recommendation on an international regime, which was submitted to COP 7 for consideration.

Seventh Meeting of the Conference of the Parties, February 2004

Discussions continued at COP 7, in 2004, on revising the bracketed text from the second Meeting of the Working Group, with the LMMC urging Parties to reconvene the ABS Working Group, and the EC, Australia, Canada and Switzerland again focused attention on problems and gaps in the Bonn Guidelines. At the conclusion of the meeting, the COP agreed in decision VII/19 to mandate the ABS Working Group to negotiate an international regime on access to genetic resources and benefit-sharing with the aim of adopting an instrument and/or instruments to effectively implement provisions in Article 15 and Article 8(j) of the Convention. The mandate included terms of reference (TOR) on the process, nature, scope and elements for consideration in the elaboration of an international regime.

Third Meeting of the Ad hoc Open-ended ABS Working Group, February 2005[10]

The ABS Working Group convened for the third time in February 2005. As mandated by the last COP, the working group launched negotiations for an international regime on ABS, in accordance with decision VII/19 of COP 7. Negotiations proved to be difficult, however, as many developed country Parties (Canada, EU and Switzerland) called on countries to undertake a gap analysis to clarify the regime's objectives and ensure that it would be consistent with other legal obligations, such as the TRIPS Agreement, while many developing countries, including the LMMC,

[9] ENB, 8/25/2004.

[10] Summary of the third meeting of the Ad hoc open-ended working group on ABS; *Earth Negotiations Bulletin*; Vol. 9 No. 311, 2005.

urged Parties to expedite the negotiations for a far-reaching legally-binding instrument that would include 'prior informed consent of the country of origin; mutually agreed terms between the country of origin and the user country; and mandatory disclosure of origin of genetic resources in IPR applications, including sanctions in case of failure.' No common ground was found regarding the nature and necessity of the regime.

In the recommendation contained in the final document, ABS-3 reiterated that it would continue working in accordance with the TOR agreed at COP 7. An annex to the final document contains sections on the nature, scope, potential objectives, elements clustered by subject matter, potential additional elements and options identified, and an analysis of gaps on the international regime. Delegates during the meeting were not certain whether the issue of negotiating an international regime on ABS was moving forward or backward. Many delegates viewed this meeting as a 'brainstorming session': the basic structural components to start negotiations on an ABS international regime were defined, taking into account the diversity of ideas presented at the meeting.

Fourth Meeting of the Ad hoc Open-ended ABS Working Group, February 2006[11]

The delegates attending the fourth meeting of the ABS-4 at the beginning of 2006 continued negotiations on the international regime. Ethiopia, with the endorsement of the African Group, tabled a draft protocol text to the Secretariat and indicated that it could serve as the basis for negotiations. Later in the meeting, the Working Group's chairman presented a text. These two texts allowed deliberations to move forward from the 'brainstorming session' of ABS-3 as they prompted delegations to clarify their positions on many of the issues to be addressed by the international regime. Delegates agreed to a recommendation to be submitted to CBD COP 8 a few weeks later. A heavily bracketed text was agreed to serve as a basis for upcoming negotiations.

The main parties to the negotiations disagreed, however, on major issues such as: 'the need for a new instrument and whether it should contain legally binding elements, the inclusion of derivatives and products of genetic resources, disclosure requirements in applications for intellectual property rights (IPRs); and the participation of indigenous and local communities in the ABS negotiations.'

The Like-minded Megadiverse Countries (LMMC), the Latin American and Caribbean Group (GRULAC) and the African Group were ready to start negotiations on the international regime at this session of the Working Group. The EU, Switzerland and Norway were not prepared to run with the text presented by the Chairperson (Spain). Diverging views inside the EU could explain why it maintained a defen-

[11] Summary of the fourth meeting of the Ad hoc open-ended working group on ABS; *Earth Negotiations Bulletin*; Vol. 9 No. 344, 2006.

sive position during the negotiations and could not formulate alternative proposals. Developed countries, including Australia, Canada and New Zealand, questioned whether time was ripe to negotiate as they were not convinced of the need for a new international instrument at this stage.

Discussions on the mechanisms to make any international regime 'workable' focused on the creation of a certificate of origin, source or legal provenance and the establishment of disclosure requirements in intellectual property rights applications. These issues inherently relate to the relationship of the future regime with existing international agreements and processes, like the

Box 3: Article 1 of the International Treaty on Plant Genetic Resources for Food and Agriculture (ITPGRFA)

The ITPGRFA was adopted by the Food and Agriculture Organization (FAO) Conference in November 2001 and came into force on 29 June 2004.

Article 1

1.1 The objectives of this Treaty are the conservation and sustainable use of plant genetic resources for food and agriculture and the fair and equitable sharing of the benefits arising out of their use, in harmony with the Convention on Biological Diversity, for sustainable agriculture and food security.

1.2 These objectives will be attained by closely linking this Treaty to the Food and Agriculture Organization of the United Nations and to the Convention on Biological Diversity.

International Treaty on Plant Genetic for Food and Agriculture (ITPGRFA), the TRIPS and WIPO. These highly controversial issues remained bracketed in their entirety in the final draft.

Eighth Meeting of the Conference of the Parties, April 2006[12]

The document to form the basis for negotiations was subject to intense debate, most proposing to use the Outcome Document of ABS-4, and others suggesting to use the gap analysis and other inputs.

The COP agreed to the following:

- To transmit the ABS-4 Outcome Document included in an annex to the fifth meeting of the Working Group, as well as, inter alia, the following inputs: the outcomes of the ad Hoc Technical Expert Group on the certificate; a progress report on the gap analysis , and the matrix; and other inputs submitted by parties' views at ABS-4;

[12] Summary of the eight conference of parties to the Convention on Biological Diversity; *Earth Negotiations Bulletin*; Vol. 9 No. 363, 2006.

- To invite parties and others to provide information regarding the inputs on an analysis of existing and legal and other instruments for ABS-5 consideration;
- To designate two permanent Co-chairs for the ABS Working Group;
- To instruct the Working Group to complete its work at the earliest possible time before COP-10;
- To invite parties and others to submit to the Secretariat further information relevant to the gap analysis, and on the status of genetic resources in their national law; and
- To request the Executive Secretary of the CBD to prepare, for ABS-5, the final version of the gap analysis, bearing in mind that this work will proceed in parallel and not hold up the work on the elaboration and negotiation of the international regime.

Negotiating Rules of Procedure: A Multilateral Simulation Exercise based on the Compliance Committee of the Cartagena Protocol[1]

Cam Carruthers[2]

1. Introduction

This paper sets out the core elements and structure of a simulation exercise on negotiating rules of procedure conducted 4 July 2005, during the UNEP – University of Joensuu University course on International Law-making and Diplomacy at the University of KwaZulu-Natal, in Pietermaritzburg, South Africa. It begins by briefly making the case for the importance of the rules of procedure in negotiations related to multilateral environmental agreements (MEAs), and then articulates the objectives of the exercise, and provides a framework scenario. The scenario is the negotiation of the rules of procedure for the Compliance Committee of the Cartagena Protocol. The paper also sets out the general instructions for participants in detail, while describing the individual instructions and roles only in general. A brief review of the exercise is provided, including observations from the participants and the facilitator. In addition, a scenario backgrounder is included, along with key texts developed for the simulation, and citations for reference texts.

1 This simulation exercise is for professional development and educational purposes. The scenario and individual instructions it contains are entirely hypothetical and not intended to represent or comment on any official policy or positions, nor the views of any individual. This exercise may not be used, reproduced, revised or translated in whole or in part by any means without written permission of the author.

2 Cam Carruthers is a senior programme officer, Compliance Programme, United Nations Climate Change Secretariat. He advises the Compliance Committee of the Kyoto Protocol on enforcement and rules of procedure issues, among other things. In addition, he chaired negotiations on the rules of procedure for a UNEP forum on the Strategic Approach to International Chemicals Management.

1.1 Importance of the rules of procedure

The rules of procedure effectively constitute a code which reflects the values and interests of Parties and informs the way negotiators work together to take decisions. The higher the level of common understanding and agreement or the rules of procedure for any given body, the more efficiently and effectively that body can operate and attain common objectives. Rules of procedure frame what happens, who can make it happen, when, where and how. Rules need to be adapted to the specific purposes of a particular forum, but generally, they cover subjects such as membership, officers, agendas, meetings, secretariat functions, languages and amendments to the rules.

All too often negotiators in multilateral environmental fora have only a limited awareness of the rules of procedure that define the arena in which they operate. Many negotiators are technical specialists or strategic actors focused on their own specific objectives, who prefer to leave rules of procedure to legal specialists, while they focus on their own priorities. Many may not even be aware of the influence of the rules on the process, as open discussion of rules is often avoided by negotiators. Yet even when no reference is made to the rules, and they do not appear to be at issue, they have a profound influence on the multilateral process and its outcomes. An obvious example is a rule on majority decision-making. Votes are generally avoided, but whether and how consensus is obtained on a given issue often largely depends on the understanding of how Parties would vote if they did vote.

Ignorance of the rules of procedure can be dangerous. It can lead to major failures in terms of policy objectives, as well as frustrations with the process – especially since often problems are often discovered after key decisions have been taken. In the multilateral process it is generally difficult, if not practically impossible, to undo process decisions once they have been taken. And process decisions can have far reaching consequences on outcomes. So it is important to integrate strategic considerations about the decision-making processes, and the rules that govern these processes, early on in any multilateral treaty endeavour. Once a decision-making process is underway, it may result in a proliferation of sub-processes with a complex set of interrelated decisions. While these processes are sometimes susceptible to congestion and inertia, it is also possible that they can move to an unexpected direction or conclusion very quickly, with considerable time and investment at risk for Parties.

This simulation is designed provide negotiators and prospective negotiators with essential familiarity with general principles and common particularities of rules of procedure, and with the ability to identify potential challenges and opportunities, when they may wish to seek further advice. With increased familiarity, participants should be able to understand and use the rules as a tool for more effective and efficient negotiation of individual and common objectives. In short, the idea of the

simulation is for participants to negotiate intellectual ownership of the rules while they negotiate textual solutions to issues contained within the rules themselves.

1.2 Simulation objectives

The focus of this simulation exercise is on the negotiation of rules of procedure for a multilateral environmental treaty body, in this case the Cartagena Protocol Compliance Committee. The general objectives are for the participants to:

1) engage on and become familiar with the principles of multilateral negation and related issues within the context of negotiation on rules of procedure;
2) to put these rules and principles into practice, in simulation contact group and informal format, of negotiating and developing text on;
3) to discuss the issues and learn about other perspectives from other participants, including by assigning roles so that each participant is matched with another with a different perspective, and so that they can mentor each other in their roles.

Within the simulation, the objective of the group, the Compliance Committee, is to produce agreement on revised rules of procedure for approval by the COP/MOP. The simulation is not intended to focus on the particulars of compliance or of the Cartagena Protocol. However, the committee and the protocol provide important context considerations for the development of text on rules of procedure, as the rules are intended to apply in this context.

1.3 Scenario

The scenario draws on texts approved by the first meeting of the actual Compliance Committee of the Cartagena Protocol, which took place from 8 to 10 March 2006. At the meeting the Committee developed it draft rules of procedures, which were subsequently approved by the COP/MOP.[3] However, in the simulation scenario the second session of the COP/MOP is unable to agree on the Rules of Procedure. The Compliance Committee is asked to reconvene while the COP/MOP is still in session to address concerns raised by Parties, and produce revised rules of procedure. Issues raised relate to voting, open and closed or public meetings, provision of information by international organizations, and conflict of interests. Participants are provided with a revised draft, notionally prepared by the co-chairs of the Committee. The revised rules are based on the text of the actual rules of procedure, but have been modified for this exercise (see rules 4, 9, 11, 12 and 14). Another key document, the decision on procedures and mechanisms,[4] has also been slightly modified,

[3] Rules of procedure for meetings of the Compliance Committee, Decision BS-II/1, UN Doc. UNEP/CBD/BS/COP-MOP/2/15.

[4] Establishment of procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety, *Cartagena Protocol,* decision BS-I/7 (UNEP/CBD/BS/COP-MOP/1/15).

to provide a broader range of discussion on the issues raised (specifically, sections I, III, IV and V).

2. The course of the exercise

2.1 Introduction session

Participants were given a presentation to introduce the exercise. Key points in the introduction included a very brief overview of the phases and roles involved in the negotiation process in general,[5] and in the compliance committee in particular, a breakdown of the organization of work and timeline for the day, suggested approaches for participants and a structured post-mortem.

For the introduction, a number of strategic considerations were outlined. Organization was identified as essential to success, including strategic management of how the working groups and the plenary sessions function and are linked. It was highlighted that the Chairs and the secretariat play a key organizational role, setting up and managing the process – and managing time – in order to produce agreement. However, it was emphasized that individual members (or delegates) should also approach meetings of this kind with a clear strategy for reaching their objectives. Among other things, it was noted that the agenda can be a key tool for members (or Parties) to shape a meeting and reach their objectives. It was emphasized that informal diplomacy is where most progress toward agreement on concepts is made, while drafting and working group discussion are required to provide agreement on specific texts and actions. Drafting was described as involving a balance between accommodation and clarity.

Decision-making in plenary was discussed, and it was noted that while it may be pro-forma, it can be critical and sometimes moves very quickly, sometimes moving back and forth on an agenda, so that being prepared with an effective intervention at any moment is essential. Finally, it was emphasized that good knowledge of the rules of procedure is invaluable for the negotiator, so that they know what they can do to advance or protect their positions, and how to do it. It was suggested that participants should consult the *MEA Negotiator's Handbook*[6] for further detail.

With respect to approach, participants were encouraged to play their part in the overall scenario for the simulation, following general and individual instructions. It was emphazised that the roles are interdependent, and some participant's individual instructions would only apply and make sense if other participants give effect to their instructions. The fact some participants and the facilitator were playing re-

[5] Participants in this exercise had already engaged in a negotiation simulation with a broader scope, which affected the design of the introduction provided.

[6] Multilateral Environmental Agreement Negotiator's Handbook 2006 (University of Joensuu, 2006).

source roles (chairs, secretariat) was highlighted, so that participants would know they could draw on those playing these roles to help them reach their objectives.

Turning to the drafting exercise and the text of the rules of procedure in particular, broad concepts and specific considerations were discussed, including efficiency, effectiveness, predictability, confidence of the Parties, inclusion and fairness. Among other things, it was suggested that rules of procedure codify a common understanding of how negotiators and members of committees work together. Two specific issues were highlighted as the focus for each working group, and participants were encouraged to narrow their focus as quickly as possible to identify issues in need of discussion, and to quickly dispose of issues where agreement was easy.

Some time was spent in discussion on the development of individual roles as well as the distribution and twinning of roles. It was underlined that the scenario in this exercise is *entirely hypothetical,* that it is not intended to reflect specific positions of particular Parties or individuals, though clearly it does draw on general regional perspectives. It was also noted that the scenario is designed to be difficult, with failure to reach agreement a real possibility.

Participants were encouraged to follow their instructions, but take the initiative and be inventive, to intervene in working groups and in plenary even if they have no specific instructions on a particular issue. Participants were also asked to think about issues for discussion in the post-mortem following the exercise.

2.2 General instructions

Below are the general instructions for participants.

1) *At a minimum, please review both the backgrounder and the revised rules of procedure proposed by the Chairs.* The revised rules are based on the text of the actual rules of procedure for the Cartagena Protocol Compliance Committee, but have been modified for this exercise (see rules 4, 9, 11, 12 and 14). Another key document, the decision on procedures and mechanisms, has also been slightly modified (specifically, sections I, III, IV and V). You may wish to review rules related to decision-making. The reference material in this package should also be useful for context. In addition, see sections 3.1, 3.2, 3.3, 3.6, 2.4, 4.3 and 5 of the *MEA Negotiators' Handbook.*
2) *Please follow your individual and confidential instructions.* Do not share your confidential instructions with other participants. The success of the simulation as a whole depends in participants negotiating both in session and informally, to promote the positions and views outlined in these instructions. You may wish to pursue contacts with others involved in the simulation before the day of the committee meeting. Note that at any time during the simulation, you may receive supplementary instructions.

3) You have been assigned to play a role with specific instructions, but also in the character of one of your co-participants. Please engage in the simulation as that person, assuming their character and nationality with respect, based in part on the brief description provided in your individual instructions. You are encouraged to consult that person, in order to draw on their actual perspectives and experience, as well as your own analysis, as much as possible within the scenario. Please keep in mind that positions taken by the different roles are in no way intended to reflect on any individual or country, and overly partisan interventions should be avoided.
4) The simulation is designed so that there is a real possibility of failure to gain agreement. The focus is on the negotiation process more than the substantive issues.
5) Feel free to make use of available resources, including the *MEA Negotiator's Handbook* and the internet. The Handbook has sections on rules of procedure, negotiating practices and a list of essentials, etc. which you may find useful.
6) In formal session, the chair or Vice Chair, whichever is presiding, should sit at the head of the room, with the two secretariat officials to his or her right and left. The remaining participants should sit in the order, following the numbering of the role on the attached participants list. When you wish to speak, please raise your nameplate and clearly signal to one of your colleagues in a secretariat role, who will keep a speakers list for the chair.
7) Please be ready to join the break-out drafting group identified in your individual instructions. The group will operate much like an informal drafting group (see *Handbook*).
8) Please accommodate other actors who approach you bilaterally, even if it interrupts a drafting session. Please treat any such discussions as informal corridor discussions.
9) A limited number of participants may exchange roles, with the agreement of the facilitator and prior to the opening of the session. In this case, one of you should also inform your co-participant in the role of the secretariat Programme Officer before the session begins.

2.3 Individual instructions

The core of the simulation is set out in confidential individual instructions. Supplementary instructions were also prepared, to be used as required, but were not needed. These instructions are not contained in this article as they are still intended for future use. Individual instructions ranged from 1-3 pages in length, providing each participant with background on their role, their position and fall-back position on each of the four key issues under discussion. Instructions also included references to key precedents from MEA fora for participants to employ. For example, with respect to participation by NGOs and IGOs, some instructions made reference to the rules of procedure developed for the UNEP forum on the Strategic Approach

to International Chemicals Management, where NGOs and IGOs participate in consensus, among other things. Another example is precedent cited on the meeting of the COP of the Convention on Biological Diversity (CBD) where one Party attempted, unsuccessfully, to block consensus.

It should be noted that for this compliance committee, as well as other similar bodies, members serve in their personal or individual capacity, and do not represent a Party. Since they were not in the role of a delegate with official instructions, there were official instructions. Rather, individual instructions gave participants particular perspectives and issues to champion. Nonetheless, instructions reflected the fact that in real world situations, individuals often have very strong views on specific issues, not always aligned with Party views (and there is a history of contention and difficulty on various MEA bodies where members act in such capacity). Participants were also assigned to a working group corresponding to their priority issues. Several individuals had specific instructions to make specific kinds of interventions, drawing on different kinds of issues and provisions reflected in the rules of procedure. For example, participants were to make motions, raise points of order, and block consensus if necessary. For guidance in dealing with procedural and strategic issues, participants were proved a copy of the *MEA Negotiators' Handbook.*

2.4 Roles

All participants were assigned roles on the compliance committee of the Cartagena Protocol, the secretariat compliance programme, or interested civil society roles. While the Compliance Committee members act in their personal capacity, roles were designed to reflect regional group perspectives, based on the country of origin of participants, including observer states. Roles were developed and assigned randomly, then adjusted for regional group and gender balance, and in order to provide participants with new experience – based on short biographical summaries provided.

The first priority was to have as many developing country participants take on a developed country role, and vice-versa, as possible. Where this was not possible, attempts were made to provide new experience by assigning NGO or secretariat roles to participants with experience as Party representatives and vice-versa. Each role involved a challenge, for some it was to chair some part of the exercise, for others, it was to advance or coordinate a particular set of positions. The group was divided into 4 (A-D) informal working groups to address key issues. Within each group, on one issue support was relatively even, while on another issue some one or two roles were relatively isolated. Some roles were moderate, and well suited to broke consensus, other roles were strongly committed to particular positions. Each role involved a relatively well-developed yet limited rationale for an interlinked set of views and positions, including fall-backs, so that the participants would need to develop their positions during the simulation. The roles are set out as follows:

Compliance Committee

- Chair
- Vice-Chair
- Chair of Working Group A
- Chair of Working Group B
- Chair of Working Group C
- Chair of Working Group D
- Members, Group A,
- Member, Group A, lead on compliance for the COP Presidency
- Members, Group B
- Member, Group B, lead on compliance for European Commission
- Members, Group C
- Member, Group D,
- Member, Group D, lead on compliance for the G-77 +China

Observer state representatives

- Representative of the United States
- Representative of Canada

NGO representatives

- NGO represenative
- Representative of aboriginal NGO

Secretariat

- Coordinator, Compliance Programme Secretariat
- Legal Advisor, Secretariat

Deputy Secretary of Secretariat, played by Cam Carruthers

2.5 Review

For the post-mortem, a number of issues were identified but not fully discussed, given that time was limited because the negotiation phase of the simulation was extended. Most of the discussion actually focused on issues and questions specific to how the exercise proceeded on that day. Questions for discussion included:

***Substantive*:**

1) How is the role of the committee and its members different than other MEA committees?
2) Is the committee quasi-judicial, and if so, what does that mean?
3) How important was it that members serve in a personal capacity?
4) How will rules of procedure in MEAs evolve in the future? Do you see trends?

The simulation:

1) How was it dealing with blocking Consensus? Points of Order?
2) Twinning of roles? Was that useful?
3) Balance of working groups? Did some feel isolated?
4) Did we accomplish our objectives? In your role? Your personal objectives?

The following is a brief record of the proceedings and analysis based on observations made by the facilitator during the simulation as well as written evaluations forms from10 participants (see the evaluation questions below) and verbal feedback from a further 9 participants. There were 32 participants in all, not including the facilitator.

Participants overcame the numerous challenges in the scenario and were able to reach agreement on all four issues and a revised text of rules of procedure. This success came despite the fact that two participants had mutually exclusive instructions to block consensus if they could not convince other members to accept their positions. They were nonetheless able to find solutions and reach agreement that they felt was reasonable and defensible, given the substance of their interests. The simulation was not designed in order to promote discussion in interest-based negotiation.[7] However, the individual instructions were constructed to allow for participants to understand the interests behind their positions, to provide the opportunity for the group to reach agreement. Moreover, as noted above, participants knew that that they were playing their role in their personal or individual capacity. Many indicated that they simply used their own judgment, as they would in a real situation, and did not feel as constrained by 'instructions'. Discussion following the simulation did not provide clear conclusions on whether the outcome was a reflection of a conscious interest-based analysis. A future simulation could explore this question more fully, given adequate time.

One interesting development is that participants in civil society and observer state roles were effectively denied access to or influence in the negotiations. While some participants playing committee members had instructions to make efforts to include them, others had instructions to exclude them if possible. While the latter were successful at excluding non-members from meaningful discussions, participants in non-member roles went beyond the scope of their instructions, and took the initiative to stage a protest. While they interrupted the proceedings, they were able to make an effective intervention. While the facilitators, as well as those in secretariat and chairing roles were forewarned, the disruption was real. Future simulations should include improved instructions so that participants in key roles are prepared to deal with situations where the efforts of individuals or groups are frustrated. It is

[7] Seminal work on the general concepts of interest-based negotiation includes Roger Fisher and William Ury, *Getting to Yes* (Houghton Mifflin, 1981); and, William, Ury, *Getting past No* (Bantam Books, 1991).

worth noting that this development is one of many demonstrations of how seriously participants engaged in the scenario and sought to proceed in a realistic manner.

With respect to roles and instructions, feedback was mixed. Some participants indicated that more background material and more elaboration on positions and fallback positions would be useful, and that participants should not deviate from their instructions, while others indicated that roles were overly scripted and that more flexibility would be preferable. It appears that it will be difficult to balance competing views on this question.

Most participants agreed that the twinning of roles and the mutual mentoring between roles was a particularly useful way of exploring and learning about different perspectives, and of initiating further discussion. However, many participants found it very challenging and confusing to manage during negotiations. The main problem was that roles were twinned so that participants exchanged names. This was a particular concern of those in chairing roles. Such challenges may reflect real difficulties faced by those who chair actual negotiations, but clearly they add to the burden of an already challenging role for some participants. In this simulation it was clear that those in chairing roles were working hard on substantive and procedural issues, so keeping track of the real and simulation names of all participants became a concern. Nonetheless, the co-chairs of the Committee and the Chairs of the working groups did not appear to have any outwardly significant problem in dealing with participants in either the formal or informal settings.

It should be noted that committees like this compliance committee involve members serving in their individual or personal capacity, so they do not represent Parties (to the Convention in question). Thus, one cannot simply assign participants to represent a country. Furthermore, with respect to facilitation, some expected participants did not attend, without notice, so the roles had to be rearranged during the course. Given that all of the roles were linked to specific participants, and were linked to considerations of gender and regional balance, as well as the specific background of participants, such adjustments involve significant effort. Some suggested that roles could be entirely fictional, but for reasons above, this would also involve challenging and labour intensive preparations. Accordingly, alternatives and improvements should be explored to achieve similar goals in future exercises.

The simulation materials were introduced one day preceding the exercise, and the exercise continued for one full day. Many participants indicated that they would have benefited from more preparation time, and more time for the exercise itself. Some suggested that a two day or one and a half day format would be preferable. Many suggested that more time be allotted for debriefing and post-mortem discussion. This appears to be a chronic challenge, given that as with many simulation exercises (and actual negotiations), negotiations were extended following requests form participants.

Participants strongly agreed that the simulation exercise achieved its general objectives with respect to promoting engagement and familiarity with the principles of multilateral negation and related issues within the context of negotiation on rules of procedure; putting the rules and principles into practice, in simulation context; and above all, participants strongly agreed that the exercise met its objectives with respect to promoting discussion of the issues from different perspectives.

3. Simulation Backgrounder

The following is the text of the 'backgrounder' provided to participants to establish the scenario for the exercise:

> A compliance mechanism under a multilateral environmental treaty is normally devised to facilitate Parties to fulfil their obligations and may also deal with non-compliance. In accordance with Article 34 of the Protocol, the Conference of the Parties serving as the meeting of the Parties to the Protocol (COP-MOP) adopted procedures and mechanisms on compliance and established a Compliance Committee to promote compliance, to address cases of non-compliance, and to provide advice or assistance.
>
> The Compliance Committee is composed of 28 members nominated by Parties and elected by the COP-MOP. The members of the Committee are to serve objectively and in a personal capacity (not representing a state). Now that the Protocol is in force, the Committee may receive, from the Secretariat, submissions relating to compliance, including submissions from: (a) any Party with respect to itself; and (b) any Party, which is affected or likely to be affected, with respect to another Party.
>
> Essentially, the Committee has an hortatory and recommendatory role. Under the authority of the Protocol, the Compliance Committee may take a number of measures with a view to promoting compliance and addressing cases of non-compliance. These include:

(a) providing advice or assistance to the Party concerned;

(b) making recommendations to the COP-MOP regarding the provision of financial and technical assistance, technology transfer, training and other capacity building measures;

(c) requesting or assisting the Party concerned to develop a compliance action plan regarding the achievement of compliance with the Protocol within a timeframe to be agreed upon between the Committee and the Party.

The COP-MOP may, upon the recommendations of the Compliance Committee, decide upon one or more of the following measures:

(a) provide financial and technical assistance;

(b) issue a caution to the concerned Party;

(c) request the Executive Secretary to publish cases of non-compliance in the Biosafety Clearing-House; and

(d) in cases of repeated non-compliance, take such measures as may be decided by the COP-MOP at its third meeting.

Development and adoption of the rules of procedure for the Committee

The first meeting of the Compliance Committee took place from 8 to 10 March 2006. At the meeting the Committee developed it draft rules of procedures. The draft rules include provisions on, *inter alia*: dates and notice of meetings; agenda; distribution and consideration of information; publication of documents and information; members; officers; participation in Committee proceedings; conduct of business; and voting.

At its second meeting, COP-MOP in is so far unable to reach consensus on the rules of procedure as proposed by the first meeting of the Committee. Issues related to voting, open and closed or public meetings, provision of information by international organizations, and conflict of interest are still unresolved. The consensus of the COP-MOP is that these matters must be resolved in order for the Committee to perform its functions.

Taking into account the fact that the members of the Committee are all present, the Chairman of the COP/MOP has asked the Chair and Vice-chair to convene the Committee and resolve the outstanding issues before the end of the current session of the COP-MOP. The COP/MOP also gave general direction to make a number of changes on specific points. Following informal consultations, the Committee met briefly and agreed to work on a revised text to be provided by the co-chairs of the Committee. The Committee now has only one full day to agree on a revised draft to be submitted to the COP-MOP the following day for adoption. In addition, the Chair and Vice-chair have been requested to report to the Chair of the COP-MOP before the afternoon session; and, following the presentation of its revised draft to the COP-MOP, the Committee is asked to meet to further consider how it performed, as well as how it could improve.

4. Key Simulation Texts

Below is the text used as the basis of negotiation in the exercise. It is based on the actual rules of procedure of the Compliance Committee of the Cartagena Protocol, with modifications to support simulation objectives and issues. It is also somewhat shorter.

Draft Rules of Procedure

Proposal by the Chair and Vice-Chair

RULES OF PROCEDURE FOR THE MEETINGS OF THE COMPLIANCE COMMITTEE OF THE CARTAGENA PROTOCOL ON BIOSAFETY

I. APPLICATION

Rule 1

These rules of procedure shall apply to any meeting of the Compliance Committee and shall be read together with and in furtherance of the procedures and mechanisms set out in decision BS-I/7 of the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety.

II. DEFINITIONS

Rule 2

For the purposes of these rules:

(a) 'Protocol' means the Cartagena Protocol on Biosafety to the Convention on Biological Diversity adopted in Montreal on 29 January 2000;
(b) 'Party' means a Party to the Protocol;
(c) 'Conference of the Parties serving as the meeting of the Parties to the Protocol' means the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety as provided for under Article 29 of the Protocol;
(d) 'Committee' means the Compliance Committee established by decision BS-I/7 of the Conference of the Parties serving as the meeting of the Parties to the Protocol;
(e) 'Chair' and 'Vice-Chair' mean, respectively, the chairperson and the vice chairperson of the Committee;
(f) Member' means a member of the Committee;
(g) 'The Compliance Procedures' means the procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety adopted by the first

meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol and set out in the annex to decision BS-I/7.

III. MEMBERS

Rule 3

1. The term of office of a member shall commence on 1 January of the calendar year immediately following his or her election and end on 31 December, two or four years thereafter, as applicable.
2. If a member of the Compliance Committee resigns or is unable to complete his or her term of office or to perform his or her functions, the Bureau of the Conference of the Parties serving as the meeting of the Parties to the Protocol shall appoint a replacement to serve the remainder of that member's term of office.

Rule 4

1. Each member shall, with respect to any matter that is under consideration by the Compliance Committee, act in an independent and impartial manner and avoid conflicts of interest.
2. Each member shall take and agree to respect an oath of service. The oath shall read as follows:
   'I solemnly declare that I will perform my duties as member of the Compliance Committee honourably, impartially and conscientiously.'
   'I further solemnly declare that, subject to my responsibilities to the Compliance Committee, I shall not disclose, even after the termination of my functions, any confidential or proprietary information coming to my knowledge in relation to my duties on the Compliance Committee.'
3. [Any Party who possesses or comes into possession of any evidence which may indicate a conflict of interest or which might be incompatible with the requirements of independence and impartiality expected of a member of the Committee, may at the earliest possible time and on a confidential basis, submit such evidence to the secretariat.]
4. [Where the secretariat receives any disclosure from a member or evidence from a Party under this rule, it shall forthwith notify the Chair of the Committee.]
5. [The Committee may decide to excuse a member from consideration of one or more meetings, after having provided a reasonable opportunity for the member to be heard.]
6. [All decisions taken under this rule shall be noted in the annual report of the Committee to the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol.]

7. [When a member is a national of a Party, or is a national of a Party which is included in a Regional Economic Integration Organization, and such Party is concerned with a question of implementation, that member shall automatically be excused from consideration of that question of implementation.]

IV. OFFICERS

Rule 5

1. The Compliance Committee shall elect a Chair and a Vice-Chair for a term of two years. Subject to rule 9 of the present rules of procedure, they shall serve in those capacities until their successors take office.

2. No officer shall serve for more than two consecutive terms.

V. DATES AND NOTICE OF MEETINGS

Rule 6

The Compliance Committee shall decide on the location, dates and duration of its meetings, taking into account the desirability of meeting in conjunction with the Conference of the Parties serving as the meeting of the Parties and its subsidiary bodies.

Rule 7

The Secretariat shall notify all members of the Compliance Committee of the dates and venue of a meeting at least six weeks before the meeting is due to commence.

VI. AGENDA

Rule 8

1. The agenda of the Compliance Committee shall include items arising from its functions as specified in section III of the Compliance Procedures.
2. The secretariat shall draft the provisional agenda for each meeting of the Compliance Committee, in consultation with the Chair and a Vice-Chair.
3. The Compliance Committee, when adopting its agenda, may decide to add, delete, defer or amend items, without prejudice to paragraph one of this rule.

VII. DISTRIBUTION OF INFORMATION AND DOCUMENTS

Rule 9

1. The Secretariat shall immediately inform Members of the Compliance Committee it receives a submission or information relevant to a submission from a competent intergovernmental organization or nongovernmental organization qualified in matters covered by the Protocol that has been admitted by the Conference of the Parties.
2. Any submission or information received by the Secretariat shall be transmitted by the Secretariat to the members of the Compliance Committee as soon as possible, for its consideration.

Rule 10

The provisional agenda, reports of meetings, official documents and, subject to rule 8 above and paragraph 4 of section V of the Compliance Procedures, any other relevant documents shall be made available to the public.

VIII. PARTICIPATION IN PROCEEDINGS OF THE COMPLIANCE COMMITTEE

Rule 11

A Party in respect of which a submission is made or which makes a submission as referred to in paragraph 1 of section IV of the Compliance Procedures shall be invited to participate in the deliberations of the Compliance Committee. The Party concerned shall be given an opportunity to comment in writing on any recommendation of the Compliance Committee. Any such comments shall be forwarded with the report of the Compliance Committee to the Conference of the Parties serving as the meeting of the Parties to the Protocol.

IX. CONDUCT OF BUSINESS

Rule 12

1. Any Party or observer state of, or organization admitted by the Conference of the Parties serving as the meeting of the Parties to the Protocol, may be present at any open meeting of the Committee.
2. The Committee may decide by a three-quarter majority vote, at any time, to close a meeting. Such a decision, including reasoning, shall be reflected in the reports of the Compliance Committee.
3. Only members of the Compliance Committee, secretariat officials and any individual invited by the Committee may be present or observe the proceed-

ings, unless the Committee decides otherwise.

4. The Party concerned with is entitled to participate in the meetings of the Compliance Committee related to the submission with which it is concerned, pursuant to paragraph 4 of section IV of the compliance procedures.

Rule 13

The Compliance Committee may only make a decision when it has a quorum of three-quarters of its members.

Rule 14

1. The Compliance Committee shall make every effort to reach agreement on all matters of substance by consensus. If all efforts to reach consensus have been exhausted and no agreement has been reached, any decision shall, as a last resort, be taken by a two-thirds majority of the members present and voting or by eight members, whichever is the greater.
2. For the purposes of these rules, the phrase ”members present and voting” means members present at the meeting at which voting takes place and casting an affirmative or negative vote. Members abstaining from voting shall be considered as not voting.

X. LANGUAGE

Rule 15

The working language of the Compliance Committee shall be English or any other official United Nations language agreed by the Compliance Committee.

XI. GENERAL

Rule 16

Any amendment to these rules of procedure shall be adopted by consensus by the Compliance Committee and submitted to the Conference of the Parties serving as the meeting of the Parties to the Protocol for consideration and approval.

Rule 17

In the event of a conflict between any provision in these rules and any provision in the Protocol or decision BS-I/7, the provisions of the Protocol or decision BS-I/7 shall prevail.

Decision BS-I/7: Procedures and Mechanisms on Compliance

The following is the text of Decision BS-I/7 of COP/MOP1 for the Cartagena Protocol, on the procedures and mechanisms on compliance, with minor revisions to facilitate the simulation.

———————

The Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety,

Recalling Article 34 of the Cartagena Protocol on Biosafety,

Recognizing the importance of establishing procedures and mechanisms to promote compliance with the provisions of the Protocol and to address cases of non-compliance,

1. Decides to adopt procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety as set out in the annex to this decision and to establish the Compliance Committee referred to therein;
2. Requests the Executive Secretary, in consultation with the Bureau of the Conference of the Parties serving as the meeting of the Parties to the Protocol, to arrange for a meeting of the Compliance Committee, to be held before the second meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol for the purpose of developing rules of procedure referred to in paragraph 7 of section II of the procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety**.**

Annex to Decision BS-I/7

PROCEDURES AND MECHANISMS ON COMPLIANCE UNDER THE CARTAGENA PROTOCOL ON BIOSAFETY

The following procedures and mechanisms are developed in accordance with Article 34 of the Cartagena Protocol on Biosafety and are separate from, and without prejudice to, the dispute settlement procedures and mechanisms established by Article 27 of the Convention on Biological Diversity.

I. Objective, nature and underlying principles

1. The objective of the compliance procedures and mechanisms shall be to promote compliance with the provisions of the Protocol, to address cases of non-compliance by Parties, and to provide advice or assistance, where appropriate.

2. The compliance procedures and mechanisms shall be simple, facilitative, non-adversarial and cooperative in nature.
3. The operation of the compliance procedures and mechanisms shall be guided by the principles of transparency, fairness, expedition and predictability. It shall pay particular attention to the special needs of developing country Parties, in particular the least developed and small island developing States among them, and Parties with economies in transition, and take into full consideration the difficulties they face in the implementation of the Protocol.

II. Institutional mechanisms

1. A Compliance Committee, hereinafter referred to as "the Committee", is hereby established to carry out the functions specified herein.
2. The Committee shall consist of 28 members nominated by Parties and elected by the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety.
3. Members of the Committee shall have recognized competence in the field of biosafety or other relevant fields, including legal or technical expertise, and serve objectively and in a personal capacity.
4. Members shall be elected by the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety for a period of four years, this being a full term. At its first meeting, the Conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol on Biosafety shall elect five members, for half a term, and ten members for a full term. Each time thereafter, the Conference of the Parties to the serving as the meeting of the Parties to the Cartagena Protocol on Biosafety shall elect for a full term, new members to replace those whose term has expired. Members shall not serve for more than two consecutive terms.
5. The Committee shall meet twice a year, unless it decides otherwise. The Secretariat shall service the meetings of the Committee.
6. The Committee shall submit its reports including recommendations with regard to the discharge of its functions to the next meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol for consideration and appropriate action.
7. The Committee shall develop and submit its rules of procedure to the Conference of the Parties serving as the meeting of the Parties for its consideration and approval.

III. Functions of the Committee

1. The Committee shall, with a view to promoting compliance and addressing cases of non-compliance, and under the overall guidance of the Conference of the Parties serving as the meeting of the Parties to the Protocol, have the following functions:
   (a) Identify the specific circumstances and possible causes of individual cases of non-compliance referred to it;
   (b) Consider information submitted to it regarding matters relating to compliance and cases of non-compliance;
   (c) Provide advice and/or assistance, as appropriate, to the concerned Party, on matters relating to compliance with a view to assisting it to comply with its obligations under the Protocol;
   (d) Review general issues of compliance by Parties with their obligations under the Protocol, taking into account the information provided in the national reports communicated in accordance with Article 33 of the Protocol and also through the Biosafety Clearing-House**;**
   (e) Take measures, as appropriate, or make recommendations, to the Conference of the Parties serving as the meeting of the Parties to the Protocol;
   (f) Carry out any other functions as may be assigned to it by the Conference of the Parties serving as the meeting of the Parties to the Protocol.

IV. Procedures

1. The Committee shall receive, through the Secretariat, any submissions relating to compliance from:
   (a) Any Party with respect to itself;
   (b) Any Party, which is affected or likely to be affected, with respect to another Party.
   The Committee may reject to consider any submission made pursuant to paragraph 1(b) of this section that is *de minimis* or ill-founded, bearing in mind the objectives of the Protocol.
2. The Secretariat shall, within fifteen days of receipt of submissions under paragraph 1 (b) above, make the submissions available to the Party concerned, and once it has received a response and information from the concerned Party, it shall transmit the submission, the response and information to the Committee.
3. A Party that has received a submission regarding its compliance with the provisions of the Protocol should respond and, with recourse to the Committee for assistance if required, provide the necessary information preferably within three months and in any event not later than six months. This period of time shall commence on the date of the receipt of the submission as certified by the Secretariat. In the case where the Secretariat has not received any response or information from the concerned Party within the six

months as referred to above, it shall transmit the submission to the Committee.

4. A Party, in respect of which a submission is made or which makes a submission, is entitled to participate in the deliberations of the Committee. This Party shall not participate in the elaboration and adoption of a recommendation of the Committee.

V. Information and consultation

1. The Committee may seek and shall receive relevant information from:
   (a) The Party concerned;
   (b) The Party that has made a submission with respect to another Party in accordance with paragraph 1(b) of section IV.
   (c) The Biosafety Clearing-House, the Conference of the Parties to the Convention, the Conference of the Parties serving as the meeting of the Parties to the Protocol, and subsidiary bodies of the Convention on Biological Diversity and the Protocol;
   (d) Relevant international organizations.
2. The Committee may seek expert advice from the biosafety roster of experts.
3. The Committee, in undertaking all of its functions and activities, shall maintain the confidentiality of any information that is confidential under Article 21 of the Protocol.

VI. Measures to promote compliance and address cases of non-compliance

1. The Committee may take one or more of the following measures with a view to promoting compliance and addressing cases of non-compliance**,** taking into account the capacity of the Party concerned, especially developing country Parties, in particular the least developed and small island developing States amongst them, and Parties with economies in transition, to comply, and such factors as the cause, type, degree and frequency of non-compliance:
   (a) Provide advice or assistance to the Party concerned, as appropriate;
   (b) Make recommendations to the Conference of the Parties to the Convention serving as the meeting of the Parties to the Protocol regarding the provision of financial and technical assistance, technology transfer, training and other capacity-building measures;
   (c) Request or assist, as appropriate, the Party concerned to develop a compliance action plan regarding the achievement of compliance with the Protocol within a timeframe to be agreed upon between the Committee and the Party concerned; and
   (d) Invite the Party concerned to submit progress reports to the Committee on the efforts it is making to comply with its obligations under the Protocol;

(e) Pursuant to paragraph 1(c) and (d) above, report to the Conference of the Parties serving as the meeting of the Parties on efforts made by Parties in non-compliance to return to compliance and maintain this as an agenda item of the Committee until adequately resolved.

2. The Conference of the Parties serving as the meeting of the Parties may, upon the recommendations of the Committee, taking into account the capacity of the Party concerned, especially developing country Parties, in particular the least developed and small island developing States amongst them, and Parties with economies in transition, to comply, and such factors as the cause, type, degree and frequency of non-compliance, also decide upon one or more of the following measures:

(a) Provide financial and technical assistance, technology transfer, training and other capacity-building measures;

(b) Issue a caution to the concerned Party;

(c) Request the Executive Secretary to publish cases of non-compliance in the Biosafety Clearing-House**;**

(d) In cases of repeated non-compliance, take such measures as may be decided by the Conference of the Parties serving as the meeting of the Parties to the Protocol at its third meeting, and thereafter in accordance with Article 35 of the Protocol, within the framework of the review process provided for in Section VII below.

VII. Review of the procedures and mechanisms

The Conference of the Parties serving as the meeting of the Parties to the Protocol shall, at its third meeting and thereafter, in line with Article 35 of the Protocol, review the effectiveness of these procedures and mechanisms, address repeated cases of non-compliance and take appropriate action.

Reference Documents

Other reference material made available to participants included official documents/ text of the Convention on Biological Diversity and the Cartagena Protocol:

1) *Cartagena Protocol* Article 34, Compliance
2) Establishment of procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety, *Cartagena Protocol,* decision BS-I/7 (UNEP/CBD/BS/COP-MOP/1/15).
3) Rules of procedure for meetings of the Compliance Committee, Decision BS-II/1, (UNEP/CBD/BS/COP-MOP/2/15).
4) Rules of Procedure for the COP to the *Convention on Biological Diversity,* Annex to Decision I/1 and Decision V/20 (UNEP/CBD/COP/1/17).
5) A note by the secretariat was also prepared for use as required (but not put forward), containing selected text relevant to the issues under discussion, including text from the World Trade Organization, Rules of Conduct for the Understanding on Rules and Procedures Governing the Settlement of

Disputes; the rules of procedure of the Clean Development Mechanism Executive Board and the International Court of Justice Rules of Court.

Evaluation Questions

Participants were requested to respond to the following evaluation questions:

- Nationality or UN regional Group (see *MEA Handbook for Negotiator*s' for UN regional group country listing);
- Profession/Education;
- Current position/occupation;
- Please briefly indicate what experience you have had in an MEA negotiation(s), if any;
- Please indicate on a scale of 1-10 the level of your knowledge on issues related to rules of procedure for MEAs before this exercise (1 being very little, 10 being complete understanding);
- Please indicate on a scale of 1-10 the level of your knowledge on issues related to rules of procedure for MEAs after this exercise (1 being very little, 10 being complete understanding);
- What role (#) did you play in this simulation?;
- Do you have any comments or suggestions on the instructions for the role?;
- Did you have the opportunity to read the materials before the exercise?;
- Do you have any comments or suggestions on the materials?
- Do you have any comments or suggestions on the facilitation of the exercise?;
- Any other comments or suggestions?

Coordination of National Positions in Connection with Biodiversity-Related International Issues

Marina von Weissenberg[1]

1. Introduction

National biodiversity policy is, to a large extent, guided by the goals of the relevant UN conventions; in particular, the Convention on Biological Diversity (CBD)[2] and the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).[3] In addition, the consideration and outcomes of the United Nations Conference on Environment and Development (UNCED), held in Rio in 1992, and also the World Summit on Sustainable Development, held in Johannesburg in 2002, with the resulting Johannesburg Plan of Action 2002, have contributed to the development of national positions and the need for coordination in connection to biodiversity-related international issues.

Concern over the loss of biodiversity and the recognition of its important role in supporting human life motivated the creation, at UNCED in 1992, of the Convention on Biological Diversity. The Convention encompasses three equally important and complementary objectives: the conservation of biodiversity, the sustainable use of its components, and the fair and equitable sharing of benefits arising out of utilization of genetic resources.[4]

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2 Convention on Biological Diversity, Rio de Janeiro, 5 June, 1992, in force December 1993, 31 *International Legal Materials* (1992) 822.

3 Convention on International Trade in Endangered Species of Wild Fauna and Flora, Washington, DC, 3 March 1973, in force 1 July 1975, 993 United Nations Treaty Series 243.

4 Global Biodiversity Outlook 2 [hereinafter GBO2], Secretariat of the CBD, 2006, available at <http://www.biodiv.org/gbo2/default.shtml> (visited 20 May 2007). The Global Biodiversity Outlook 2 was launched in Curitiba, Brazil on 20 March 2006.The objectives are laid down in Art.1 of the CBD.

The United Nations Convention on Biological Diversity was signed fourteen years ago; but human activities are still accelerating the decline of the world's species, habitats and genetic resources. According to experts, some 16,000 animal species and 60,000 plant species are under threat. The Millennium Ecosystem Assessment (MEA) research project, which was supported by UN Secretary-General Kofi Annan and funded by the World Bank and other international donors, showed in 2005 that habitats vital to about 60% of the world's human population have been impoverished or are being unsustainably exploited due to population growth and economic expansion.[5]

2. Why biodiversity loss is a concern

The services provided by healthy ecosystems are the foundation for human well-being. However, out of the twenty-four ecosystem services recently assessed by the MA, fifteen are in decline. These include the provision of fresh water, marine fishery production, the number and quality of places of spiritual and religious values, pollination, the capacity of agricultural ecosystems to provide pest control, and the ability of the atmosphere to cleanse itself of pollutants.[6]

This trend can only be reversed if the parties to the CBD work more effectively to promote the conservation, management and sustainable use of biodiversity. The international community is committed to slowing significantly the ongoing decline in biodiversity by 2010. The European Union has also resolved to halt the loss of biodiversity by 2010.[7] The primary responsibility for meeting the 2010 target of significantly reducing the rate of biodiversity loss lies with the parties to the CBD.[8] To give focus and impetus to this effort, all parties should develop and implement comprehensive national biodiversity strategies and action plans (NBSAPs) that include national targets for 2010.[9]

The economic exploitation of natural environments is globally the most significant factor behind the impoverishment of biodiversity. Every year about two per cent of the world's original natural habitats are converted into farmland, commercially managed forests or built-up areas. This trend has led to the shrinking and fragmentation of natural environments, and widespread extinctions of the species and populations dependent on them, in both industrialized and developing countries. Other

[5] Millennium Ecosystem Assessment: Ecosystems and Human Well-Being: Biodiversity Synthesis, World Resources Institute, Washington DC, 2005. See <http://www.millenniumassessment.org> (visited 20 May 2007).

[6] GBO2, see *supra* note 4.

[7] Communication from the European Commission, '*Halting the Loss of Biodiversity by 2010 – and Beyond*', 22 May 2006 (COM (2006) 216 final), available at <http://ec.europa.eu/environment/nature/biodiversity/current_biodiversity_policy/biodiversity_com_2006/index_en.htm> (visited 20 May 2007).

[8] 'Progress towards halting the loss of biodiversity by 2010', European Environment Agency, EEA Report No. 5/2006.

[9] See Art. 6 of the CBD.

specific threats to biodiversity include climate change, harmful invasive species, the excessive exploitation of natural resources, and pollution.[10] Harmful environmental changes often become evident only after a certain time lag. Partly because of this, the ongoing impoverishment of the natural environment has not yet been given sufficient attention, even though it is a truly global phenomenon.

The weakening of ecological communities can lead to serious disruption of the vital ecosystem services that they provide for humans; such as clean water, functioning water cycles, carbon sequestration, pollination and the recycling of nutrients. The capacities of ecosystems can, to some extent, be restored through, for instance, reforestation; but forest plantations cannot compensate for the loss of natural levels of forest biodiversity. Little research data is yet available on the linkages between biodiversity and ecosystem services; but changes in the natural environment are proceeding at an alarmingly rapid rate.

The deterioration of the natural environment in different countries, as exemplified by the worrying shrinkage of the world's tropical rainforests and old growth forests, is often a consequence of social problems such as poverty and uncontrolled population growth; with natural habitats consequently being converted to agricultural land to increase food production or forestry interests. Environmental deterioration can also be the result of poorly planned socio-economic incentives such as misdirected subsidies. Agricultural subsidies, for instance, may promote short-term farming practices that lead to the loss of natural forests, the destruction of farmland, and the decline of natural sources of nutrition. The consequent problems can particularly affect people in poorer countries. In many countries, efforts are generally being made to slow the ongoing loss of biodiversity through various measures at different levels. In land use planning, for example, valuable habitats are surveyed and protected to prevent their fragmentation.[11] The key species and species groups within ecosystems are defined, and steps are taken in an effort to ensure their populations remain viable in the long term.

3. Objectives, needs and challenges

The main objectives of the CBD include the conservation and sustainable use of biodiversity, and the fair and equitable sharing of the benefits arising out of the utilization of genetic resources. To implement the related commitments, and to monitor these efforts, a *Strategic Plan* has been created according to a decision made by the

[10] For more information see: <http://www.greenfacts.org/ecosystems/> (visited 20 May 2007).

[11] *National strategy and action plan for the conservation and sustainable use of biodiversity in Finland 2006-2016: Saving Nature for People*, (Helsinki 2006). The English version is available in June 2007. For more information, see <http://www.biodiv.org> (national reports) and <http://www.environment.fi/lumonet/> (visited 20 May 2007).

Conference of Parties,[12] and it will be applied through thematic and cross-cutting working programmes with their own strategic guidelines and plans.

The parties to the CBD have committed themselves to implementing the Convention's three main objectives more effectively. The COP has approved seven thematic work programmes; addressing marine and coastal biodiversity, agricultural biodiversity, forest biodiversity, island biodiversity, the biodiversity of inland waters, dry and sub-humid lands and mountain biodiversity. Each of these thematic programmes defines a vision, and also includes basic guiding principles, the most important issues to be addressed, expected results, and a schedule. The implementation of these programmes will involve the Secretariat, and other interested organizations around the world, as well as the countries that have signed the CBD. The thematic programmes of work will be periodically revised at COPs.

The COP has also often addressed issues that cut across many of these thematic areas. Such cross-cutting issues include sustainable use, biosafety, the availability of genetic resources and the sharing of the related benefits (ABS), the traditional knowledge of indigenous peoples, indicators, taxonomy, communications, education and public awareness, incentives, and invasive species. Many of these issues, such as the development of indicators, also directly support the implementation of the thematic programmes of work.[13] Separate documents have been drafted on other issues, including a programme of work on protected areas,[14] the Biosafety Protocol,[15] and the voluntary guidelines concerning invasive species.[16]

4. The governance system

The main provision that sets the national framework for implementation of the Convention is the requirement to develop National Biodiversity Strategies, Plans and Programmes (NBSAPs), as stipulated in Article 6. Art. 6 of the CBD requires the following:

> Each Contracting Party shall, in accordance with its particular conditions and capabilities:
> a) Develop national strategies, plans and programmes for the conservation and sustainable use of biological diversity or adapt for this purpose existing strategies, plans or programmes which shall reflect, inter alia, the measures set out in this Convention relevant to the Contracting Party concerned; and

[12] See CBD COP Decision VI/26, UN Doc. UNEP/CBD/COP6 (2002).
[13] For more information on these specific programmes, see <http://www.biodiv.org/programmes/default.shtml> (visited 20 May 2007).
[14] CBD COP Decision VII/28, UN Doc. UNEP/CBD/COP/7/21 (2006).
[15] See <http://www.biodiv.org/biosafety/signinglist.aspx?sts=rtf&ord=dt> (visited 20 May 2007).
[16] CBD COP Decision VIII/27, UN Doc. UNEP/CBD/COP/8/31 (2006).

> b) Integrate, as far as possible and as appropriate, the conservation and sustainable use of biological diversity into relevant sectoral and cross-sectoral plans, programmes and policies.[17]

The protection of biodiversity requires the gradual integration of the conservation and sustainable use of biodiversity with, for instance, legislation, land use planning and utilization and management of natural resources. Because the Convention is a framework convention, it is argued that it is difficult to transpose generalities into specific legislative measures. Furthermore, some of the obligations in the Convention can be fulfilled through means other than primarily legislative ones, for instance by intensifying sectoral responsibility in different socio-economic sectors and by using the *Ecosystem Approach,*[18] which aims to provide a comprehensive overview for the purposes of planning the conservation, management and sustainable use of biodiversity. On the other hand, there is a need for legislation controlling various activities to ensure that issues related to biodiversity are given due consideration.[19] In practice, possible points that could, or perhaps should, be amended on the national level need to be examined; but, again, it is difficult to establish clearly what amendments are required for compliance with the Convention,[20] without clear rules and guidelines from CBD and the COP.

Without an institutional framework and sufficient human resources within the system of governance, the integration of biodiversity concerns into different policy areas is difficult. This is illustrated by a study on mean modeled governance scores and changes in total national forest cover, for the years 1990 to 1995. The authors show that the better the governance system is working, the smaller the change in forest cover.[21]

The European Union, in its Council Conclusions,[22] stresses the need to continue to update and implement national biodiversity strategies and action plans and underlines the need to enhance coordination and complementarity between Member States and the European Community level in this regard.

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17 See Article 6 (a) and (b) of the CBD.

18 See <http://www.biodiv.org/programmes/cross-cutting/ecosystem/default.shtml> (visited 20 May 2007).

19 The Implementation of the National Action Plan for Biodiversity in Finland 2002-2004, Third progress report, Ministry of the Environment, 2005. For more information on CBD/CHM, see <http://www.environment.fi/lumonet> (visited 20 May 2007).

20 For more information and background, see National Action Plan for Biodiversity in Finland, 1997-2005, Ministry of the Environment, 1998, available at <http://www.biodiv.org/doc/world/fi/fi-nr-01-en.pdf> (visited 20 May 2007) and Hildén, M., Auvinen, A.-P. and Primmer, E. (eds), 'English abstract: Evaluation of the Finnish National Action Plan for Biodiversity', 770 *Suomen ympäristö (2005),* 1-251. For more information and English Summary, see <http://www.environment.fi/download.asp?contentid=49277&lan=en> (visited 20 May 2007).

21 Smith, R.J., R.D.J. Muir, M.J. Walpole, A. Balmford, and N. Leader-Williams, 'Governance and the loss of biodiversity', 426 *Nature* (2003) 67-70.

22 European Union, Council Conclusions: Halting the Loss of Biodiversity by 2010 (2006). For more information, see <http://ec.europa.eu/environment/nature/biodiversity/current_biodiversity_policy/biodiversity_com_2006/index_en.htm> (visited 20 May 2007).

International environmental agreements give all of their parties both joint responsibilities and specific obligations. The industrialized countries have to help developing countries to fulfill their own obligations; for instance, through technology transfer and capacity building. Supporting developing countries' efforts to implement international environmental agreements is nowadays also an integral part of the development cooperation programmes of many countries. Ecosystem services are a major factor behind almost all of the UN's Millennium Development Goals (MDGs).[23] Biodiversity thus plays an important role in economic development as a whole, in addition to its importance as a factor in environmentally sustainable development.

A review of the development cooperation carried out by Finland's environmental sector was completed in spring 2006.[24] The guidelines for Finland's development cooperation incorporate the sustainable use of biodiversity as a key factor behind efforts to reduce poverty. The environmental sector's development cooperation work is still being improved; with the help of objectives and measures related to the conservation, management and sustainable use of biodiversity. In recent years there has been much discussion about the opportunities for cooperation and synergies between different multilateral environmental agreements (MEAs). Such agreements tend to have many common and mutually supportive features and objectives. Implementing the CBD can, for instance, strengthen the parties' ability to adapt to climate change; and also to reduce some of the impacts of climate change that could particularly threaten food production in arid regions and among impoverished groups in developing countries. Intensifying the cooperation and dialogues between the different fields covered by MEAs is a major challenge. The objective of halting ongoing loss of biodiversity should be incorporated into agreements; which should also be made to support each other more effectively.

The preservation of biodiversity is in many ways linked to trade, trade policies, and trade restrictions. The opening up of global trade and markets is leading to changes in both global economic mechanisms and the regional features of the use of natural resources. As people become increasingly mobile, plants and animals have been transported to parts of the world where they never previously existed, entering the local web of life and sometimes altering it profoundly. This means that the coordination of national positions on issues related to biodiversity, and the linkages to different interests and sectors make issues and decision making even more complex and poses challenges for the coordination and policy making both nationally and internationally.

[23] For more information on the MDGs, see <http://www.un.org/millenniumgoals/> (visited 20 May 2007).

[24] Summary in English, see <http://www.environment.fi/download.asp?contentid=49277&lan=en> (visited 20 May 2007).

From a national point of view it is clear that coordination between different ministries in charge of biodiversity-related conventions and environmental agreements (MEAs), and of national positions, needs a systemized and an enhanced knowledge base of best practices. Many parties to the CBD and national governments have also come to this conclusion; and it is clear that integrating biodiversity considerations into adaptation activities is a rapidly developing area, with many new national plans in preparation in the field of climate change. Opportunities to develop synergies between conventions, or to share best practices from ongoing work, warrant further consideration by national governments and the CBD.[25] For the implementation of CBD provisions national reporting is another important requirement in line with Article 26 of the CBD:

> 'Each Contracting Party shall, at intervals to be determined by the COP, present to the COP, reports on measures which it has taken for the implementation of the provisions of this Convention and their effectiveness in meeting the objectives of this Convention'.

Successful reporting is a challenge; and, to be successful, it needs good national resources and coordination between different stakeholders. The reports should contain detailed information on parties' efforts to implement the Convention, including the amount of resources and the capacity needs of the party.

The First National Reports were due at the end of 1998, and 138 reports were submitted. The Second National Reports were due by 15 May 2003, and 144 reports were received by the Secretariat. In response to the notification by the Secretariat, by November 2006 a total of 103 Third National Reports had been received, and a further 20 are expected to be completed.[26] A strategy to follow-up with those parties that have neither submitted their third national reports, nor have informed the Secretariat of their plans to do so, is being drafted and implemented in order to facilitate preparation and submission of reports. All focal points of such parties have been contacted to remind them of the need to submit third national reports.[27] Parties should submit, in accordance with Decision VIII/4, paragraph 4, their Fourth National Reports to the Secretariat by 30 March 2009. By the end of July 2006, the Fourth National Report guidelines were finalized and made available to the parties.[28]

[25] *Guidance for promoting synergy among activities addressing biological diversity, desertification, land degradation and climate change,* CBD Technical Series No. 25 (2006)

[26] CBD Secretariat, Quarterly Reports, October-December 2006, available at <http://www.biodiv.org/doc/quarterly/qr-35-en.doc> (visited 20 May 2007).

[27] Report on activities of the Secretariat on the implementation of the work programme of the Convention and its Protocol, UN Doc. UNEP/CBD/COP/Bur/2006/6 (2006).

[28] In accordance with the CBD notification No. 2006-083 (2006). See <http://www.biodiv.org/doc/guidelines/nr-04-gd-lns-en.doc> (visited 20 May 2007).

The reports are based on extensive planning and assessment exercises on the state of national biodiversity. Collectively, the process of producing the reports, which engendered the development of national biodiversity strategies and action plans (NBSAPs) in almost every country in the world, represents the most extensive planning and coordination exercise addressing biodiversity to date.[29]

5. National actions for conservation of biodiversity in Finland

Finland has promoted the conservation, management and sustainable use of biodiversity for more than a decade on the basis of the principles defined in the CBD. During the years 1996-1997 a National Action Plan for Biodiversity in Finland[30] was drawn up by the National Biodiversity Committee; which Committee is made up of the representatives of ministries, key business sectors, research institutes, environmental organizations and other stakeholder groups. This plan covered the period 1997-2005, was to be implemented by 2005, and included 124 measures designed to promote the conservation, management, and sustainable use of biodiversity. The National Action Plan was drafted in accordance with a Government 'decision in principle' of 21 December 1995; with the aim of promoting cooperation on the implementation of the CBD between different administrative sectors. The new National Action Plan was also designed to complement the Finnish Government's 1988 Sustainable Development Programme[31] with regard to the conservation, management, and sustainable use of biodiversity.

The implementation of the National Action Plan was monitored by a broadly based monitoring group; which was responsible also for the revision of the Plan in response to newly perceived needs, the latest research results, and other national and international developments. Progress reports have been duly submitted to the CBD Secretariat. In the First Progress Report the monitoring group examined the implementation of the Plan during the period 1997-1999,[32] and identified twelve important areas for development. A Second Progress Report was compiled; focusing on actions taken in these areas during the period 2000-2001.[33] The Third Progress Report

[29] Gross, T, Johnston, S, Barber C-V (eds), '*The Convention on Biological Diversity: Understanding and Influencing the Process. A guide to Understanding and Participating Effectively in the Eighth Conference of the Parties to the Convention on Biological Diversity (COP8)*' (United Nations University (UNU-IAS) 2006).

[30] See <http://www.biodiv.org/doc/world/fi/fi-nr-01-en.pdf> (visited 20 May 2007).

[31] See <http://www.ymparisto.fi/download.asp?contentid=6081&lan=en> and <http://www.environment.fi/ default.asp?node=8410&lan=en> (visited 20 May 2007).

[32] The implementation of the National Action Plan for Biodiversity in Finland 1997-1999, First progress report (summary), Ministry of the Environment (2000). For more information, see Finnish CBD/Clearing House Mechanism, available at <http://www.ymparisto.fi/lumonet/>, <http://www.environment.fi/lumonet/> and <http://www.environment.fi/ default.asp?node=8410&lan=en> (visited 20 May 2007).

[33] The implementation of the National Action Plan for Biodiversity in Finland 2000-2001, Second Progress Report (summary), Ministry of the Environment (2002). For more information, see <http://www.environment.fi/lumonet/> (visited 20 May 2007).

continued to assess the implementation of the National Action Plan during the years 2002-2004.[34] These Progress Reports are in effect assessments made by Finland's ministries and other stakeholder groups of the effectiveness of their own actions.

As a party to the CBD, Finland is committed to promoting the conservation and sustainable use of biodiversity in activities in all sectors of society (Art. 6 of the CBD). By the time implementation of the National Action Plan for Biodiversity in Finland 1997-2005 began; a good basis had been established for the Action Plan itself, for decision-making and other developments related to biodiversity, and for cooperation between the administrative sectors concerned and other stakeholder groups, thanks to renewed legislation and other factors. Issues related to biodiversity have been successfully integrated into new and revised Finnish legislation, including the Land Use and Building Act (132/1999), the Penal Code (39/1889, amendments up to 1006/2004 included) the Gene Technology Act (377/1995), the Nature Conservation Act and Decree (1096/1996 and 160/1997), the Forest Act (1093/1996) and the Water Act (264/1961 and the Government proposal HE 52/2005).[35]

Sectoral responsibility for the conservation, management and sustainable use of biodiversity as, specified in the National Action Plan, has been duly adopted by all branches of the administration. Stakeholder groups are also committed to maintaining biodiversity. The Ministries of Agriculture and Forestry, of the Environment, of Transport and Communications, of Defence, and of Education and Culture have all developed their activities and planning procedures; and have provided training for personnel working within their administrative spheres on issues related to biodiversity.

In spite of many positive developments, however, it has become evident that the measures within the National Action Plan will not be sufficient to halt, or even significantly to slow, the ongoing decline in biodiversity in Finland by 2010. It seems to be very hard to rapidly reverse this persistent trend. Many of the negative trends affecting biodiversity in Finland's forests, for instance, have emerged over long periods; while earlier practices may still result in delayed impacts on biodiversity, even though forestry methods have changed significantly in recent decades. Meanwhile, changes in forestry and the spread of residential areas in recent decades have resulted in new trends that impoverish the natural environment. Climate change is also now seen as a major threat to nature as well as to mankind.

[34] The implementation of the National Action Plan for Biodiversity in Finland 2002-2004, Third Progress Report (summary) Ministry of the Environment (2005). For more information, see <http://www.environment.fi/lumonet/>.

[35] For more information on Finnish legislation in English, see <http://www.finlex.fi/en/> (visited 20 May 2005).

The most significant challenges noted at the conclusion of the implementation of the National Action Plan at the end of 2005 were as follows:

- the wide-ranging nature of the action plan;
- the lack of a comprehensive research-based overview of the state of biodiversity and the impacts of the action plan;
- the practical implementation of sectoral responsibility;
- the need to find new kinds of activities and economic mechanisms that will help to safeguard biodiversity;
- the need to make the contents and objectives of policies designed to safeguard biodiversity more widely understandable; and
- the need to find ways to disseminate information about biodiversity data so as to facilitate regional and local decision-making

An evaluation of the National Action Plan for Biodiversity in Finland 1997-2005[36] conducted during the years 2004-2005 provided a wealth of additional information on the current state of biodiversity in Finland, on current trends, and on the impacts of the practices and measures adopted so far. This evaluation showed that the need to safeguard biodiversity is widely understood in Finnish society; but that the measures within the Action Plan have still not been sufficient overall to halt or reverse the ongoing negative trend in biodiversity in Finland.

The renewed 2nd National Biodiversity Strategy and Action Plan in Finland for 2006-2016 was drafted, as a continuation of the implementation of the CBD and the 2010 target, largely on the basis of a detailed evaluation of the previous NBSAP 1997-2005. The new NBSAP was approved by the Council of State in December 2006.[37]

The new strategy includes five main objectives and supporting key measures. One of the aims is to improve monitoring, planning and information systems related to biodiversity; in order to implement permanent mechanisms for gathering data and for establishing relevant indicators. The principle of sectoral responsibility is an important part of the NBSAP for the conservation of biodiversity; meaning that each sector takes responsibility for reducing its harmful effects on the environment. Additionally, the conservation and sustainable use of biodiversity requires strengthening of co-operation between different administrative sectors; including the establish-ment of a broad-based body to oversee the national implementation and monitoring.[38]

[36] Hildén, et al. (eds), 'English abstract: Evaluation of the Finnish National Action Plan for Biodiversity', *supra* note 20.

[37] See Valtioneuvoston periaatepäätös Suomen luonnon monimuotoisuuden suojelun ja kestävän käytön strategiasta vuosiksi 2006-2016: Luonnon puolesta – ihmisen hyväksi, available at <http://www.environment.fi/lumonet>. The English version is available in June 2007.

[38] National strategy and action plan for the conservation and sustainable use of biodiversity in Finland 2006-2016: Saving Nature for People (2006). The English version is available in June 2007. For further information, see <http://www.biodiv.org>, <http://www.environment.fi> and <http://www.environment.fi/default.asp?node=8410&lan=EN> (visited 20 May 2007).

In order to monitor the implementation of both the NBSAP and of international work; the Ministry of the Environment of Finland set up a national biodiversity monitoring group already in 1998. The monitoring group is a cooperative body involving representatives from various stakeholder organizations; and it is responsible for coordinating and overseeing the implementation and monitoring of the CBD in Finland. The members of the group come from all of the different ministries, from NGO's and from the representative body of the indigenous Samí people (the Samí Parliament). Additionally, since 2003 there has been a group working on international biodiversity issues that operates in the same way as the monitoring group; and that is chaired by the Ministry of the Environment. The task of the international biodiversity issues group has been to co-ordinate Finland's participation and positions related to the CBD, to biodiversity-related conventions and to the European Union.

6. Conclusion

The proper and healthy functioning of natural ecosystems cannot be maintained merely by strict protection of certain species or habitats. The task of conserving and maintaining biodiversity must involve measures taken by business sectors, by private firms and by citizens, as well as by national and local authorities. Innovative and comprehensive land use planning methods are needed to alleviate the harmful impacts of socio-economic activities on the natural environment; whilst also safeguarding the livelihoods of people dependent on natural resources.

There remains much progress to be made on the implementation of the Convention on Biological Diversity. By adopting and ratifying biodiversity-related conventions, a paradigm shift appears to have emerged towards sustainable natural resource management.[39] Although many parties have made efforts and improved their governance systems nationally to include, for instance, environmental legislation and institutional capacity building; progress seems slow toward the implementation of integrated national systems for the management of biodiversity. In essence, there have been many positive developments within national systems, with appropriate legislation being promulgated to promote and protect biodiversity in line with the obligations of the CBD. In many countries, however, these developments are relatively recent. What remains to be seen is whether the provisions of the CBD will be enforced, and whether the effective management of biodiversity issues on regional, national and international levels will be secured, in the future. National coordination is important for a consistent approach in international negotiations. The problem of institutional fragmentation nationally, and the question of global environmental governance, are issues that will continue to require consideration and solutions. These issues need support from national governments; but, equally a

[39] Anthony Maina: National Governance System for the management of biodiversity, a preparatory task paper for the 2006 University of Joensuu – UNEP course, on file with author.

stronger and more effective, but simplified, international environmental governance solution is needed.

The existence of proper national governance systems for the management of biodiversity is a pre-condition for successful biodiversity results on the ground. Policies are needed for guiding the use and conservation of natural resources; besides providing avenues for addressing conflicts over resource use. In the absence of appropriate natural resource policies, unsustainable practices have pushed and will continue to push both species and habitats closer toward critical thresholds.

The Global Environment Facility – A brief introduction

Matti Nummelin[1]

1. Introduction

The Global Environment Facility (GEF)[2] was established in 1991. Its goal is the support of developing countries and countries in economic transition; which goal is achieved through grants and concessional credits to implement multilateral environmental agreements. GEF provides new and additional funding to meet the costs incremental costs of transforming an environmental project with national benefits into one with global environmental benefits. GEF's first budget, for the years 1994-1997, was US$2 billion. Since then, replenishments have been made in the amount of approximately US$3 billion; the latest replenishment being made for the years 2006-2010. EU member countries are the major donors of GEF; giving nearly 60% of the last replenishment.

2. GEF in operation

GEF has six focal areas; being: i) biodiversity; ii) climate change; iii) international waters; iv) ozone depletion; v) land degradation; and vi) persistent organic pollutants. A developing country must be a party to the relevant environmental treaty in order to be eligible for GEF funding. Other countries have to be a party to the relevant treaty and be eligible to borrow from the World Bank.

GEF's primary role is to link local level structures with global environmental concerns. GEF also advances sustainable development in individual nations; whilst improving protection of the global environment. It complements existing aid; but is not, and is not intended to be, a substitute for regular development finance. How-

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[2] For more information, see <http://www.thegef.org>.

ever, the criterion of incrementality was much discussed and questioned, especially by the developing world, when the rules of the GEF were being formulated. GEF leverages additional funding and seeks to operate by way of co-finance, replication and follow-up. GEF projects are country driven and based on national priorities. They must also be designed for sustainable development.

During the years 1991-2003, GEF funded over 1300 projects in 140 developing countries. Of these, GEF provided US$1 639 million for biodiversity-related projects; US$ 1 592 million for climate change-related projects; US$628 million for projects related to international waters; US$172 million for ozone depletion-related projects; US$23 million for projects related to land degradation; US$86 million for projects related to persistent organic pollutants; and US$247 million for projects having multiple focal areas. GEF projects are normally designed to work through co-financing arrangements. Of the total financing of GEF projects; approximately 77% has been made by way of co-financing. Thus, every US$1 invested by GEF leverages US$3 in co-financing from partners.

GEF's governing council develops, adopts, and evaluates GEF programs and policies. Its 32 members represent 16 developing countries, 14 developed countries, and 2 countries with transitional economies. The members represent their regional constituencies and normally the representative and her/his alternate member come from different country. GEF performs its work in countries through political and operational Focal Points. GEF also provides support to the Focal Points. Country dialogue in programme contry, which also includes dialogue with non-governmental organizations (NGOs) and local communities, is considered to be an important working method. Representatives from all GEF member-states provide overall direction to the GEF through the GEF Assembly, which meets every four years.

3. Implementation of GEF projects

GEF projects are managed by GEF Implementing Agencies;[3] which are i) the United Nations Environment Programme (UNEP); ii) the United Nations Development Programme (UNDP); and iii) the World Bank. Seven other international organisations, known as GEF Executing Agencies, contribute to the management and execution of GEF projects.

Implementing Agencies have different roles: the UNDP provides technical assistance, takes care of capacity building for the environmental sector, and supports the preparation and implementation of national strategies of the environmental

[3] For more information, see generally <http://www.gefweb.org/interior.aspx?id=104&ekmensel=c580fa7b_48_50_104_1> (visited 30 May 2007).

agreements. The UNDP also manages the GEF Small Grants Programme for NGOs,[4] which links environmental concerns to livelihood need through community-based approaches. UNEP's role is to support technical and scientific development and co-operation. The World Bank takes care of GEF investment projects.

The seven Executing Agencies are: the African Development Bank (AfDB); the Asian Development Bank (ADB); the European Bank for Reconstruction and Development (EBRD); the Inter-American Development Bank (IDB); the International Fund for Agricultural Development (IFAD); the UN Food and Agriculture Organization (FAO); and the UN Industrial Development Organization (UNIDO).

GEF has, to date, 178 member countries.[5] The GEF Secretariat coordinates activities and serves and reports to the Assembly and Council and to the Conventions. Implementing Agencies and Executing Agencies create project proposals and manage GEF projects. NGOs assist in the design, execution, and monitoring of projects. GEF's Scientific and Technical Advisory Panel (STAP) assures the scientific and technical quality of projects. GEF also has an independent Evaluation Office.[6]

Over 1000 NGOs are accredited by GEF; and more than 700 NGOs actively participate in GEF activities and oversee GEF projects. There are NGO consultations before Council Meetings; and five NGOs act as observers in a Council Meeting. NGOs also give assistance in designing projects and executing the Small Grants Programme.

4. A new GEF framework for the future

GEF adopted the so-called Resource Allocation Framework (RAF)[7] in 2006 for climate change and biodiversity focal areas. The RAF is based on each country's potential to generate global environmental benefits and each country's capacity, policies and practices successfully to implement GEF projects. It is presumed that the RAF will bring increased predictability in the allocation of GEF funds (giving indicative allocations for countries). There will be an independent review, by the GEF Evaluation Office, of the RAF operational experience after 2 years.

[4] See generally <http://www.gefweb.org/interior.aspx?id=17250> (visited 30 May 2007). The Small Grants Programme has provided grants of up to $50,000 to finance more than 1,200 NGO-executed projects; see <http://www.gefweb.org/interior.aspx?id=114&ekmensel=c580fa7b_48_50_114_5> (visited 30 May 2007).

[5] See generally <http://www.gefweb.org/interior.aspx?id=210> (visited 30 May 2007). The most recent country to join was Somalia, on 11 April 2007

[6] See generally <http://www.gefweb.org/gefevaluation.aspx> (visited 30 May 2007). The GEF Evaluation Office is an independent evaluation body which works within the GEF. It reports directly on monitoring and evaluation matters to the GEF Council.

[7] See generally <http://www.gefweb.org/Operational_Policies/Resource_Allocation_Framework.html> (visited 30 May 2007).

The importance of the Framework, in the present context, is that it means that eligible countries will be able to gain access to resources to fund projects and enabling activities in the areas of biodiversity protection and climate change.[8]

There has been criticism of the framework, however. Even before its start, the RAF was criticized as concentrating its assistance on only a few countries. Critics have also pointed out that global benefits should perhaps not be bound to a country policy.

[8] *Ibid.*