International Environmental Law-making and Diplomacy Review 2004

Marko Berglund (editor)

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Foreword

The articles in the present Review are based on lectures given during the first University of Joensuu – UNEP Course on International Environmental Law-making and Diplomacy, which was held from 22 August to 3 September 2004 in Joensuu, Finland. The Course was a concrete outcome of the co-operation between the University of Joensuu and UNEP to advance the implementation of local, regional and global objectives agreed at the 2002 World Summit on Sustainable Development and enhance the capacities of future negotiators in international negotiations.

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 intended to be 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 36 participants from 28 countries, with an equal distribution from the North and South, participated in the first Course.

We would like to express our gratitude to all of those who contributed to the successful outcome of the first 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 Marko Berglund for skilful editing of the Review and the Editorial Board for providing guidance in the editing work.

Professor Perttu Vartiainen
Rector of the University of Joensuu

Dr. Klaus Töpfer
Executive Director of UNEP

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 sustainable development, regime-building, governance, synergy, compliance and the role of NGOs. Moreover, the inaugural volume focuses on water as a specific theme.

The lectures of the first University of Joensuu – UNEP Course, from which the articles in the present Review emanate, were delivered by experienced hands-on diplomats, government officials and members of academia.[1] 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 lecturers' and resource persons' diverse professional backgrounds.

Marko Berglund edited the Review and helped prepare some of the articles by writing draft versions based on the lectures and presentations given by the speakers. General editing tasks included checking the style and content of the submissions and providing research assistance by checking, adding and editing references and footnotes. All Internet references were valid as of 15 March 2005.

The present Review is divided into five sections. Part I addresses general issues relating to international environmental diplomacy and governance. Shafqat Kakakhel's article presents an overview of developments in international environmental diplomacy and addresses current challenges in the field. Donald Kaniaru focuses on the concept of sustainable development in more detail and shows how it is being applied in practice. Johannah Bernstein presents the current challenges of sustainable development governance and possible ways forward.

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

Part II addresses in more detail international environmental law-making and specific regimes. By way of introduction, Päivi Kaukoranta presents international law-making and the treaty-making process. Marc Pallemaerts develops this theme further by focusing specifically on the sources, principles and regimes of international environmental law. Brook Boyer addresses the different stages of multilateral environmental negotiations and brings forward organizational structures and other related issues. Frits Schlingemann identifies global and regional dynamics of international environmental law and conventions, as well as of international environmental institutions, and presents an example of the work of UNEP/Regional Office for Europe. Sachiko Kuwabara-Yamamoto provides another example of a specific international environmental regime. Heidi Hautala's article addresses the role of national parliaments and non-governmental organizations in international environmental law-making. Tuula Varis reminds us of the need to take into consideration outside regimes and influences, in this case international trade law and the WTO, which affect international environmental regimes.

Part III deals with compliance with multilateral environmental agreements (MEAs). Patrick Széll introduces the topic and gives an overview of present compliance structures including drafting skills required for such tasks. Elizabeth Maruma Mrema presents UNEP's role in non-compliance procedures and UNEP's Guidelines on Compliance with and Enforcement of MEAs.

Part IV addresses the special theme of the first Course: Water. Esko Kuusisto gives a general overview of the state of current freshwater resources, problems and future challenges. Tuomas Kuokkanen maps the development of international law related to freshwater resources. Niels Ipsen and Marko Berglund focus on current international freshwater agreements and integrated water resources management. Anna-Liisa Tanskanen provides an example of water co-operation arrangements between Finland and Russia on the local and regional level.

Part V brings forward the interactive nature of the Course. The three papers presented in this part are based on an exercise conducted during the Course. Ed Couzens explores the topic of human rights and the environment. Kong Xiangwen addresses the issue of finding synergies between MEAs and dividing them into clusters of agreements. Cam Carruthers develops the idea of a Super Conference of the Parties to co-ordinate and bring together the work undertaken under different MEAs.

Overall, the articles in the present Review represent various aspects of the broad and complex field of international environmental law-making and diplomacy. As an attempt to draw general conclusions out of the articles, one can highlight the following points. First, in many areas the management of environmental problems requires close co-operation between international policy-makers and scientific experts. This is the case, for instance, in relation to the sound management of hazardous chemicals and waste. Second, modern environmental conventions appear to be dynamic regimes rather than static agreements. Third, the management of environmental issues might need specific techniques and tailor-made solutions. Compliance mechanisms and procedures are

good examples to this effect. Fourth, the effective management of environmental issues requires co-operation with other sectors, such as the trade sector. Fifth, the emergence of separate environmental rules and techniques does not mean that general international law is not relevant. On the contrary, in order to avoid unnecessary fragmentation, it is important in the environmental sector to be conscious of general international law issues, such as treaty-making aspects under treaty law.

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Abbreviations

ABS	Access and Benefit-sharing
ASEAN	Association of Southeast Asian States
BAT	Best Available Techniques
BEP	Best Environmental Practice
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CEIT	Countries with Economies in Transition
CEP	Caspian Environment Programme
CIS	Commonwealth of Independent States
CITES	Convention on International Trade in Endangered Species of Wild Flora and Fauna
CLRTAP	Convention on Long-range Transboundary Air Pollution
COP	Conference of Parties
CSD	Commission on Sustainable Development
CSO	Civil society organization
CTESS	Committee on Trade and Environment Special Session
EC	European Community
ECOSOC	United Nations Economic and Social Council
ESM	Environmentally Sound Management
EU	European Union
FAO	Food and Agriculture Organization
GATT	General Agreement on Tariffs and Trade
GC/GMEF	Governing Council/Global Ministerial Environment Forum
GEF	Global Environment Facility
IAEA	International Atomic Energy Organization
IC	Implementation Committee
ICJ	International Court of Justice
IGO	Intergovernmental organization
ILO	International Labour Organization
IMO	International Maritime Organization
IUCN	International Union for the Conservation of Nature
IWRM	Integrated Water Resources Management
MCP	Multilateral Consultative Process
MDG	Millennium Development Goal
MEA	Multilateral environmental agreement
MOP	Meeting of Parties

MOU	Memorandum of Understanding
NGO	Non-governmental organization
NIP	National Implementation Plan
OECD	Organization for Economic Co-operation and Development
OJ	Official Journal
PCIJ	Permanent Court of International Justice
PIC	Prior Informed Consent
POP	Persistent Organic Pollutant
REIO	Regional Economic Integration Organization
SADC	Southern African Development Community
SAICM	Strategic Approach to International Chemicals Management
SAP	Strategic Action Programme
SBI	Subsidiary Body for Implementation
SBSTA	Subsidiary Body for Scientific and Technological Advice
TDA	Transboundary Diagnostic Analysis
TEAP	Technical and Economic Assessment Panel
TRFS	Terrestrial Renewable Freshwater Supply
TRIPS	Trade-related Aspects of Intellectual Property Rights
UNCED	United Nations Conference on Environment and Development
UNCHE	United Nations Conference on the Human Environment
UNCLOS	United Nations Convention on the Law of the Sea
UNCTAD	United Nations Conference on Trade and Development
UNDP	United Nations Development Programme
UNECE	United Nations Economic Commission for Europe
UNEP	United Nations Environment Programme
UNEP/ROE	United Nations Environment Programme/Regional Office for Europe
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
UNRIAA	United Nations Reports of International Arbitral Awards
UNU	United Nations University
WCED	World Commission on Environment and Development
WIPO	World Intellectual Property Organization
WMO	World Meteorological Organization
WPS	Water Policy and Strategy
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization

PART I

INTERNATIONAL ENVIRONMENTAL DIPLOMACY AND GOVERNANCE

INTERNATIONAL ENVIRONMENTAL DIPLOMACY[1]

Shafqat Kakakhel[2]

Introduction

Narrowly defined, environmental diplomacy is comprised of negotiations among government representatives with the aim of agreeing legally binding treaties or agreements, or non-binding plans of action or guidelines for addressing environmental issues, requiring action both within national boundaries and across frontiers, by either a group of countries or by all countries concerned with those issues. A broader definition would refer to all relevant factors and actors such as socio-economic drivers, science and technology, or civil society and the media, which have decisively impacted on how the international community has viewed the relationship between human actions and the ability of our planet to sustain life.

Environmental diplomacy is a newcomer in international relations as diplomacy has historically focused on issues of war and peace. It has emerged and evolved as a logical corollary of the global consequences of industrial civilization. The 19th century Industrial Revolution was facilitated by advances in the application of science and technology which enabled the more efficient utilization of ever-growing quantities of both locally and distantly situated natural resources. These resources were used in the production of goods which were considered useful either for improving the quality of life during peace time or for causing greater destruction in times of armed conflicts. The introduction of steamships, the invention of electricity, the discovery of oil, the construction of railways and cars, the triumph of medical science over treating diseases and epidemics and the control of weather conditions led to greater prosperity, longer life spans and an unprecedented increase in population. These and other scientific advances also made the two World Wars of the 20th century far more destructive than their predecessors. Industrialization also led to the destruction of flora and fauna and the generation of waste and pollution, threatening human health.

[1] This paper is based on a lecture given by the author on 23 August 2004.

[2] United Nations Assistant Secretary General and Deputy Executive Director, United Nations Environment Programme.

During the past two centuries, industrialization has been seen as the indispensable prerequisite of - indeed synonymous with - progress. The Industrial Revolution has spawned, and is sustained by, a culture of materialism and consumerism viewed as being essential for human wellbeing. However, since the second half of the 20th century, growing numbers of individuals, groups, governments, and lately, industry, have begun to reduce the negative effects of industrial civilization through cleaner and more resource efficient production processes that create larger quantities of goods but generate declining volumes of waste and pollution. We have also seen a growing recognition that durable solutions to environmental problems, especially those of a transboundary nature, require not only actions within national boundaries but also co-operation among countries.

The 1950s and 1960s witnessed not only a spectacularly speedy recovery from the destruction wrought by the Second World War but they also saw the emergence of domestic action and regional and international co-operation in addressing local, transboundary, and global environmental issues. In the US and Western Europe, campaigns by concerned citizens led to the enactment of laws and regulations aimed at avoiding or mitigating the health hazards posed by air and water pollution, strip mining, highway construction, noise pollution, the canalization of dams and streams, the clear cutting of forests, hazardous waste dumps, nuclear power plants, exposure to toxic chemicals, oil spills and suburban sprawl. Successes achieved in a domestic context encouraged the revival and strengthening of pre-war efforts to negotiate agreements on international co-operation to deal with environmental threats which could only be countered through joint efforts by several or most countries. The 1960s saw a rapid increase in the number of regional and global environmental agreements which were focused for the most part on the protection of wildlife and migratory species and the prevention and control of marine pollution. The UN Conference on the Human Environment in June 1972 in Stockholm was truly a watershed event with regard to the evolution of the global environmental agenda. The resulting declaration stipulated action within national boundaries as well as increasing regional and global co-operation to address the ever growing threats to the environment.

Milestones in international environmental diplomacy

I shall briefly refer to the Stockholm Conference and five significant developments since, namely: the publication of *Our Common Future*, the report of the UN Commission headed by Gro Harlem Brundtland, in 1987;[3] the UN Conference on Environment and Development (UNCED), also known as the Earth Summit, in 1992; the special session of the UN General Assembly known as Rio+5, in 1997; the special session of

[3] WCED, *Our Common Future*, *infra* note 9.

the UN General Assembly, known as the Millennium Assembly, in September 2000; the World Summit on Sustainable Development held in Johannesburg, in August - September 2002.

Stockholm – 1972

The UN Conference on the Human Environment in Stockholm in June 1972 highlighted the international community's recognition that the protection and improvement of the human environment was a global objective, whose realization would require action within countries as well as regional and international co-operation. The Conference initiated a process of high level debate among representatives of governments and non-governmental organizations (NGOs) and other non-state actors, on the negative ecological impacts of human actions and population growth, and how the international community could act in concert to avoid and mitigate them. Stockholm also brought to the fore, points on which global consensus could be achieved, but also areas where rich and poor countries sharply disagreed on the genesis of the problems and the methods for addressing them.

In 1971, Maurice Strong, Secretary General of the conference, convened meetings in Geneva between economists and senior officials from developed and developing countries, which helped clarify the issues to be addressed by the Stockholm Conference.[4] Participants agreed that most serious environmental problems in poor countries resulted from extreme poverty and lack of economic development. They also agreed that developed countries must provide financial and technical resources to developing countries to enable them to achieve the linked objectives of socio-economic development and environmental protection.

The Stockholm Conference was attended by representatives of 113 countries as well as scores of inter-governmental and non-governmental organizations. At the Conference, the participants seemed to have different agendas. Developed countries paid lip service to the protection of the global environment but appeared unenthusiastic about providing financial support to developing countries. Developing countries were willing to concede the importance of environmental protection but insisted that rich nations must lead, both with regard to domestic action and in assisting them to achieve economic development which would generate the resources needed for taking better care of the environment. The environmental organizations assembled in Stockholm carried out a spirited campaign demanding serious efforts within countries and co-operation among states to counteract environmental threats.

[4] The meetings in Founex are discussed in Maurice Strong, *Where on Earth Are We Going?* (Alfred Knopf, 2000) at 124-125, and in Mustafa Tolba and Iwona Rummerl-Bulska, *Global Environmental Diplomacy* (MIT Press, 1998) at 2.

Eventually the negotiators managed to hammer out compromise texts. Two documents, a short, eight-page paper comprising a proclamation and a set of 26 principles,[5] and a longer Action Plan containing 109 recommendations on addressing environmental challenges represent the results of the Stockholm Conference.[6] The Stockholm Declaration proclaimed that 'protection and improvement of the human environment is a major issue which affects the well-being of peoples and economic development throughout the world.'[7] It stressed the inextricable nexus between environment and development and called for the narrowing of the gap between rich and poor countries. The Action Plan addressed major environmental issues and suggested action by governments and the UN system to deal with them.

The UN General Assembly considered the outcomes of the Stockholm Conference in December 1972. It adopted a resolution establishing the United Nations Environment Programme (UNEP) with a mandate to promote international co-operation in the field of the environment, review world environmental threats in order to facilitate their intergovernmental consideration and to promote the acquisition, assessment and exchange of environmental knowledge and information, as well as facilitate and coordinate the implementation of environmental activities of the UN system.[8]

The post-Stockholm years witnessed the establishment of environmental ministries and agencies – as well as increasing budgets for these – in most developed countries and in a growing number of developing ones; the enactment of environmental laws, especially in industrialized countries; a proliferation of global and regional environmental treaties; the strengthening of existing academic and scientific research and policy centres dealing with environmental and developmental issues, and the establishment of new ones. New processes and networks were also set up for the comprehensive assessment of global environmental issues such as climate change, the ozone layer, effects of atomic radiation, biodiversity, solid and hazardous waste, marine and inland water pollution caused by shipping as well as land based activities, conservation of wildlife, prohibition of trade in endangered species of flora and fauna, etc.

UNEP played a significant role in catalyzing and facilitating most if not all of these developments. It vigorously campaigned for the integration of environmental imperatives in national and global initiatives addressing the challenges of peace and development. Its role was especially crucial in respect of the assessment of environmental

[5] Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503.

[6] United Nations Conference on the Human Environment, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1492.

[7] Principle 2, Stockholm Declaration, *supra* note 5.

[8] Institutional and Financial Arrangements for International Environmental Co-operation, GA Res. 2997 (XXVII), 15 December 1972.

threats, the articulation of policy responses, the negotiation of multilateral agreements and the development of environmental law.

Despite these positive developments, the overall state of the global environment continued to deteriorate. Poverty and malnutrition as well as political and social unrest and problems of governance grew unabatedly in developing countries. Studies and assessment of climate change highlighted the serious threats posed by burgeoning emissions of greenhouse gases. Forests, oceans and other ecosystems faced increased depletion and degradation. The loss of fisheries and plant and animal species accelerated. Developed countries failed to provide significant support to developing countries for socio-economic development or for meeting the commitments agreed in Stockholm.

At the end of the 1970s and the beginning of the 1980s, environmental movements in the US and Europe grew both in size and impact. The emergence of Green Parties in many countries lent a new legitimacy and authority to environmental activism and served to highlight the mismatch between ecological deterioration and the local and global efforts to arrest and reverse it.

The Brundtland Commission

In 1983, the UN Secretary-General requested Gro Harlem Brundtland to head a commission to review environmental and developmental issues. The Commission undertook an exhaustive examination of critical environmental and developmental issues such as growth in the world economy, technology, globalization and inter-dependence and the impacts of economic growth in terms of resource depletion and pollution and degradation. It also reviewed the quantum, quality and impact of international efforts in addressing these issues and considered measures for enhanced co-operation.

In 1987 the Brundtland Commission's report *Our Common Future*[9] referred to a clear demonstration of the widespread feeling of frustration and inadequacy in the international community about our own inability to address the vital global issues and deal effectively with them. It declared that 'a new development path was required, one that sustained human progress not just in a few places for a few years but for the entire planet into the distant future'[10] and used the term sustainable development which was defined as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'[11] The report called for renewed and greater efforts to eliminate widespread poverty which it asserted was 'no longer

[9] World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press, 1987) UN Doc. A/42/47 (1987)(The Brundtland Report).

[10] *Ibid.*, at 4.

[11] *Ibid.*, at 43.

inevitable'[12] and referred to the need for 'not only a new era of economic growth for nations in which the majority are poor, but an assurance that those poor get their fair share of the resources required to sustain that growth.'[13]

Our Common Future contains a thorough review of the correlation between population, energy, industry, food security, agriculture and forestry, human settlements, international economic relations and decision support systems, and environment and development, as well as of the quality and quantum of international co-operation. It offers recommendations for addressing environmental protection gaps and developmental needs, as well as a set of principles to inspire and shape action by the international community. The report emphasized the importance of international co-operation, urging 'new dimensions of multilateralism' to achieve sustainable human progress. In response to *Our Common Future*, in December 1989 the UN General Assembly decided to convene the UN Conference on Environment and Development in June 1992 in Rio de Janeiro, in order 'to elaborate strategies and measures to halt and reverse the effects of environmental degradation in the context of increased national and international efforts to promote environmentally sound development in all countries.'14

The Earth Summit (1992)

The UN Conference on Environment and Development (UNCED), also known as the Earth Summit was held in Rio in June 1992 in the optimistic atmosphere accompanying the end of the Cold War. It was preceded by a worldwide official and scientific preparatory process during which virtually every environment and development issue was comprehensively analyzed by experts and negotiated by representatives of Governments and other stakeholders. Attended by over 10 000 delegates, including 116 heads of state and 1400 NGOs, and covered by 9000 journalists, UNCED was at the time the largest meeting in the history of the UN.

The UNCED preparatory process and the negotiations during the Summit were marked by a North-South polarization. While the former called for greater efforts by developing countries to address environmental threats, the latter placed a higher priority on development than environment, insisting that developed countries agree to provide new and additional financial resources and technology transfer as a condition for developing countries' acceptance of environmental commitments. Notwithstanding the protracted and often acrimonious negotiations of the Rio Summit, consensus was

[12] *Ibid.*, at 8.

[13] *Ibid.*

[14] Section I, Article 3, GA Res. 44/228, 22 December 1989, www.un.org/documents/ga/res/44/a44r228.htm.

eventually reached by the Rio negotiators on the Rio Declaration,[15] a short document comprising 27 principles, and on Agenda 21,[16] a 279-page Action Plan. The Summit also witnessed the signing of the historic Framework Convention on Climate Change[17] and the Convention on Biodiversity[18] and approved a statement of principles for the sustainable management of forests.[19]

The Rio Declaration affirmed states' responsibility to 'ensure that activities within their jurisdiction or control do not cause damage to the environment of other states or areas beyond the limits of national jurisdiction',[20] stressed that 'environmental protection shall constitute an integral part of the development process',[21] emphasized the importance of co-operation[22] and the 'special needs of developing countries.'[23] The Declaration also called for 'a global partnership to conserve, protect and restore the health and integrity of the Earth's ecosystems' adding that states have 'common but differentiated responsibilities'[24] and recommended 'the reduction and elimination of unsustainable patterns of consumption and production.'[25] It supported the participation of citizens in environmental decision making as well as access to relevant information and justice[26] and recommended the application of the precautionary approach for environmental protection.[27]

[15] Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

[16] United Nations Conference on Environment and Development, *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

[17] United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

[18] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, www.biodiv.org/doc/legal/cbd-en.pdf.

[19] Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. III), www.un.org/documents/ga/conf151/aconf15126-3annex3.htm.

[20] Principle 2, Rio Declaration, *supra* note 15.

[21] Principle 4, Rio Declaration, *ibid.*

[22] Principle 5, Rio Declaration, *ibid.*

[23] Principle 6, Rio Declaration, *ibid.*

[24] Principle 7, Rio Declaration, *ibid.*

[25] Principle 8, Rio Declaration, *ibid.*

[26] Principle 10, Rio Declaration, *ibid.*

[27] Principle 15, Rio Declaration, *ibid.*

Agenda 21 addressed all major sectoral and cross-sectoral environmental and developmental challenges. Its 40 chapters are divided into four sections entitled Social and Economic Dimension, Conservation and Management of Resources for Development, Strengthening the Role of Major Groups and Means of Implementation. The environmental issues addressed included: atmosphere; land resources; deforestation; fragile ecosystems; agriculture; biodiversity; biotechnology; seas and coasts; fresh water; chemicals; and hazardous, solid, and radioactive wastes. Agenda 21 called for action by all stakeholders within and across national boundaries to address environmental threats in the framework of sustainable development, embracing sustained economic development based on equity, enhancement of the social wellbeing of people, and protection of the environment. It called for integrated policies and action in all these interdependent and mutually reinforcing areas. Agenda 21 spelt out the mandates, roles and responsibilities of UN agencies and bodies, including the United Nations Development Programme (UNDP) and UNEP. It also recommended the establishment of the Commission on Sustainable Development as a high-level forum for discussing, monitoring and expediting the implementation of Agenda 21 through dialogue which would synthesize economic, social and environmental imperatives while promoting enhanced international co-operation and improved decision-making.

Rio+5 (1997)

In 1997, the UN General Assembly organized a special session in New York, popularly known as Rio+5, to review the progress in the implementation of the Rio outcomes, and to agree on measures to set aside the obstacles impeding full implementation. The Commission on Sustainable Development's session during the same year served as a preparatory meeting for Rio+5. The Special Session's outcome is contained in a document entitled Programme of Action for the Further Implementation of Agenda 21.[28]

The deliberations of the Rio+5 meeting were characterized by the evident widening of the North-South divide. Developing countries did not mince words in castigating developed countries for the continued, in fact accelerated, degradation of the global environment. They also accused developed countries of not fulfilling the Rio commitments either in terms of facilitating the creation of a global context enabling the improvement of developing countries' developmental prospects through resolution of the problems of debt, aid and trade, and technological transfers, or by providing new and additional financial resources for supporting the efforts of developing countries for dealing with global environmental issues. Perhaps more seriously, there was neither the enthusiasm among developed or developing countries to propose any significant new initiatives or drastic solutions in response to the deteriorating trends, nor the willingness for the give and take without which diplomacy cannot work.

[28] Programme for the Further Implementation of Agenda 21, GA Res. S/19-2, 28 June 1997, www.un.org/documents/ga/res/spec/aress19-2.htm.

The Millennium Summit (2000)

In September 2000, the General Assembly held the Millennium Summit to address the serious issues facing humankind in the new millennium. The six fundamental values identified by world leaders as being 'essential to international relations in the twenty first century' included 'respect for nature.'[29] The Declaration called for the prudent management of all living species and natural resources in a sustainable manner, and for change in the unsustainable patterns of consumption and production.

Section IV of the Millennium Declaration, entitled Protecting Our Common Environment, laid down several goals and targets which have since been called the Millennium Development Goals (MDGs). Goal 7: Ensure Environmental Sustainability, calls for the integration of the principles of sustainable development into national policies and programmes and for the reversal of the loss of environmental resources. The specific targets set by the Summit include reducing by half the proportion of people without access to safe drinking water by 2015 and achieving significant improvement in the lives of at least 100 million slum dwellers by 2020.

Malmö Declaration (2000)

A Special Session of the UNEP Governing Council was held in Malmö in May 2000. After prolonged negotiations it adopted a statement known as the Malmö Ministerial Declaration[30] as input on the environmental perspective of sustainable development challenges, to be considered by the WSSD. Bringing these significant points to the fore, the Declaration:

(i) stated the 'urgent need for reinvigorated international co-operation based on common concerns and a spirit of international partnership and solidarity;'[31]
(ii) called for the 'mobilization of domestic and international resources, including development assistance, far beyond current levels;'[32]
(iii) emphasized 'the central importance of environmental compliance, enforcement and liability . . . the precautionary approach . . . as well as capacity-building;'[33]
(iv) identified threats resulting from urbanization and development of mega cities, climate change, freshwater crisis, depletion of biological resources, drought and desertification, and deforestation, environmental emergencies and health hazardous posed by chemicals and pollution as issues that need to be addressed.[34]

[29] Article 6, United Nations Millennium Declaration, GA Res. 55/2, 8 September 2000.

[30] Malmö Ministerial Declaration, 31 May 2000 (hereinafter Malmö Declaration), www.unep.org/malmo/malmo_ministerial.htm.

[31] Article 1, *ibid.*

[32] Article 2, *ibid.*

[33] Article 3, *ibid.*

[34] Article 5, *ibid.*

The Declaration took cognizance of the pressures exerted by globalization but also of the potential positive roles of business and civil society. Moreover, one of the most significant recommendations of the Malmö conference was its call for the WSSD to 'review the requirements for a greatly strengthened institutional structure for international environmental governance based on an assessment of future needs for an institutional architecture that has the capacity to effectively address wide-ranging environmental threats in a globalizing world.'[35] Heeding this call, in 2001 the Governing Council of UNEP set up a high-level group to address issues of international environmental governance. The Working Group's negotiated a set of proposals which were subsequently endorsed by the World Summit on Sustainable Development.

The World Summit on Sustainable Development (2002)

The World Summit on Sustainable Development (WSSD) in Johannesburg in August-September 2002 is the most recent development in the global quest for sustainable development. The WSSD aimed to review the implementation of the outcomes of UNCED with a view to reinvigorating, at the highest political level, the global commitment to sustainable development. However, the WSSD, also called Rio+10, Earth Summit+10 or the Johannesburg Summit, was held in a global context far less optimistic than that of UNCED. The signs observed during Rio+5 that the post-Cold War euphoria had begun to subside were replaced by evidence of what Martin Khor, a leading spokesman for the developing world, called 'a crisis atmosphere.' Secretary-General Kofi Annan's special personal efforts to energize and focus the preparatory process, including his so called WEHAB initiative proposing that the Summit give priority attention to the problems of Water, Energy, Health and Agriculture, and Biodiversity, alongside a series of regional preparatory meetings, helped in arresting widespread scepticism in the developing countries towards the Summit. The venue of the Conference was also helpful. Eventually over thirty thousand representatives of state and non-state sectors attended, making the WSSD the largest UN meeting in history.

Negotiations during the preparatory process of the WSSD and the Summit itself were indeed tortuous. The Conference's proceedings once again highlighted the differences between developed and developing countries as well as the fissures within the Organization for Economic Co-operation and Development (OECD). Developing countries recalled the North-South compact or deal forged in Rio: developing countries had agreed to integrate the objective of environmental sustainability in their overall developmental process in return for substantial new and additional transfers of financial resources, technology, scientific and technical know-how and a more equitable global context resulting from the resolution of problems of debt repayment, development assistance and better access for their products into the rich countries markets. They lamented the failure of the North to respect the Rio compact. Spokesmen from devel-

[35] Article 24, *ibid.*

oping countries also underlined gaps in the Rio outcomes in regard to the actions of transnational corporations and implementation mechanisms, which had resulted in the accelerated deterioration and degradation of the global environment and the increase in absolute poverty to a level where it afflicts more than one third of the world population. Furthermore, developing country governments and NGOs called for structural change in the global economic agenda based on the environment-development nexus the revival of North-South dialogue and a strengthened North-South partnership based on just and durable solutions relating to the debt owed by the South to and barriers such as colossal agricultural subsidies in rich countries, which impede exports from developing countries.

Notwithstanding the positive developments since Rio, the Johannesburg delegates acknowledged that all environmental and socio-economic indicators had registered several fold deterioration. Nearly all the developed countries also accepted not having kept the Rio promises and made assurances that they would try harder in future to comply with their commitments.

The outcomes of the intergovernmental negotiations in Johannesburg are recorded in a short four and a half page political declaration[36] and a 70-page Plan of Implementation.[37] The Declaration contains a renewed commitment to poverty eradication, changing consumption and production patterns and protecting and managing the natural resource base for economic and social development, and identifies these as 'overarching objectives' which are 'essential prerequisites' of sustainable development. The Declaration referred to the rich-poor divide within countries and the ever-increasing gap between developed and developing countries. It also mentioned the continued degradation of the global environment and specifically noted loss of biodiversity, depletion of fish stocks, accelerated desertification adverse effects of climate change, more frequent and destructive natural disasters and air, water and marine pollution. The Declaration reaffirms the commitment to multilateralism and the role of the UN in strengthening it. The Plan of Implementation reiterates Agenda 21 and in places supplements it. The most significant feature is the time-bound targets for achieving a set of goals some of which had been agreed at the Millennium Summit. These included reducing by half the proportion of people living without water and sanitation by 2015; restoring fisheries to their maximum sustainable yields by 2015; reducing biodiversity losses by 2010; and ensuring the use and production of chemicals in ways that do not harm health by 2020. Furthermore, all countries are to have strategies in place for integrated water resource management by 2005.

[36] World Summit on Sustainable Development, *Johannesburg Declaration on Sustainable Development*, 4 September 2002, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POI_PD.htm.

[37] World Summit on Sustainable Development, *Johannesburg Plan of Implementation*, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm.

A significant and initially controversial departure from UNCED was that the WSSD served as "midwife" for roughly 280 partnership initiatives, providing for collaboration among governments of developed and developing countries, multilateral organizations within and outside the UN, and civil society, including the business sector, with the aim of jointly addressing sustainable development issues such as cleaner fuels and vehicles, fresh water, renewable energy, etc.

Current Environmental Challenges and Responses

Three years after the WSSD, how do we see the environmental challenges facing us and threatening the next generation? An objective review of the development, over the last five decades, relevant to the evolution of the global environmental agenda and diplomacy reveals a mixed picture of significant successes and disappointing failures. Positive signals can be seen in the face of an overall degradation of the environment.

Universal recognition of the importance of the environment is indicated by a greater appreciation of the need for operationalizing the acknowledged nexus between environment and development. The definition of environment is no longer confined to the biosphere but also encompasses socio-economic driving forces. Sustainable development is recognized as the overarching goal comprising economic growth, social justice and environmental protection.

Ministries and Departments of Environment and/or Environmental Protection Agencies have been established in virtually each and every country. UNCED and WSSD stimulated the preparation or revision of national environmental protection and sustainable development strategies and plans. Environmental legislation in response to local concerns as well as in pursuance of commitments under multilateral agreements has witnessed unprecedented development. Schools, universities and scientific institutions are setting up environmental courses and greening the activities and syllabuses of professional studies. There is greater recognition of the responsibilities of the legislature and the judiciary as well as the roles of industry, the scientific community, civil society at large and the media in promoting environmental protection and sustainable development.

Our knowledge of environmental threats and the socio-economic forces driving them has grown enormously and at present we have reasonably reliable and comprehensive assessments of the scale and magnitude of all relevant aspects relating to issues of climate change, biodiversity and the ecosystems, freshwater and oceans, air and land pollution, chemicals, hazardous wastes, etc. Science and technology have made unprecedented strides in enhancing the efficiency of fossil fuels and other raw materials, thereby reducing the threats linked to the depletion of resources, adverse climate impacts and deadly waste and pollution. Significant successes have been achieved in developing renewable clean energy and in finding answers to various issues of the urban agenda.

The importance of regional co-operation in achieving environmental and sustainable development objectives is evidenced by the proliferation, in all regions, of political, institutional, financial and legal arrangements, for safeguarding and improving shared assets and countering common, transboundary challenges. At the global level, the need for co-operation and partnerships is accepted, as is the especially serious nature and scale of environmental threats in the developing world. Governments have negotiated over 500 multilateral environmental agreements, plans of action or guidelines and/or have initiated processes for evolving strategic approaches to address all major issues, ranging from climate stability, the protection of the ozone layer, the preservation and sustainable utilization of biodiversity and chemicals, to the protection of animal and plant species, wetlands and wildernesses. It is now widely acknowledged that neither governments nor any other stakeholder acting alone can ensure the protection of the environment or achieve sustainable development and that only effective and concerted action by all stakeholders will reduce the growing threats to the health of our planet.

Global environmental governance has grown exponentially. Apart from UNEP, the principal environmental organization of the UN system, the Department of Economics and Social Affairs of the UNHQ, UNDP, the Regional Economic and Social Commissions and virtually every UN agency - from the International Maritime Organization (IMO) and the World Metereological Organization (WMO) to the World Health Organization (WHO), the International Labour Organization (ILO), the World Intellectual Property Organization (WIPO), the World Trade Organization (WTO), the Food and Agricultural Organization (FAO), the United Nations Conference on Trade and Development (UNCTAD) and the United Nations Educational, Scientific and Cultural Organization (UNESCO) - have embarked on or stepped up pro-environment activities. The proliferation of MEAs has led to a fragmentation of the global environmental agenda. The Commission on Sustainable Development (CSD), the United Nations Economic and Social Council (ECOSOC) and the General Assembly regularly deliberate this global agenda.

The number of transnational corporations claiming commitment to sustainable development or engagement in pro-environment activities or agreeing to report on the environmental effects of their activities is growing by the day. All media organs have increased their coverage of environmental issues and improved its quality. However, the litany of negative environmental trends exacerbated by failures on the part of nearly all stakeholders in international community to take positive action is far longer.

With the exception of the success of efforts to protect the ozone layer, each and every global environmental threat has grown in scale and magnitude. Despite growing and incontrovertible scientific corroboration of the threats posed by climate change resulting from emissions of greenhouse gases, the escalating loss of biodiversity and the vulnerability of all ecosystems, especially oceans and forests, and the adverse impacts of agricultural, industrial and household chemicals for human health, there has been negligible progress in effectively dealing with these issues.

While issues on the domestic agenda of developed countries', such as air and water quality, have been dealt with quite well, the trends in most developing countries in respect of the same set of problems show rapid deterioration. Developing countries lack either the policy framework, governance structures or human, financial, technical and technological resources to translate their oft-reiterated commitment to sustainable development into tangible actions. The only redeeming features are the increasingly vocal and effective civil society structures.

Regional co-operation structures are also far more successful in developed countries than in the developing world. The same is the case in regard to the effectiveness of multilateral environmental agreements or plans of action. In terms of global co-operation, the gap between the Rio commitments and promises and the situation on the ground is becoming wider and wider. The Rio compact or deal exists largely only on paper. The Global Environment Facility and the Multilateral Fund for the phasing out of ozone depleting substances are the only sources of funding available for meeting the incremental costs incurred by developing countries in implementing MEAs. In any case, most MEAs are devoid of effective mechanisms for compliance and enforcement. Moreover, the favourable global economic order considered necessary for enabling developing countries to eradicate poverty and protect the environment is nowhere in sight.

The global environmental governance structure is also plagued by insufficient political will manifested by the lack of authority, effective co-ordination and adequate resources that would enable UNEP, CSD, UNDP and other multilateral agencies to respond to environmental challenges. The MEA secretariats are geographically dispersed and lack resources to implement the global agreements.

Recommendations

First, the two principal and intertwined challenges that will have to be addressed are what Maurice Strong often describes as a recession in political will to achieve sustainable development, and the lack of trust between developing and developed countries and, consequently, a genuine, functioning partnership in the face of growing threats to our biosphere. The lack of political will is evidenced by the inability of politicians everywhere to place long-term sustainability above short-term electoral exigencies. It is also reflected in inadequate assistance to developing countries through environmentally integrated development co-operation, comprising the transfer of financial and technological resources as well as the removal of trade distorting subsidies and other tariff and non-tariff measures. Efforts are, therefore, called to arrest and reverse the recession in political levels.

Second, the environmental governance structure of the UN needs to be revitalized through better functioning governing bodies, inter-agency coherence, and provision of sufficient authority and resources. The Bretton Woods institutions as well as other

lending institutions need to exert greater efforts to gear their activities towards the achievement of sustainable development.

Third, the private sector should invest more in research and development activities for developing cleaner production processes, renewable energy sources, energy efficient transport and pollution abasement systems, as well as agree to more transparent reporting and the independent evaluation and monitoring of their activities. Governments in both developing and developed countries would need to redouble efforts to promote sustainable development through necessary policy changes, efficient, transparent and accountable institutions, and the full participation of industry and civil society.

Fourth, the underlying causes of environmental degradation, such as population growth, poverty and underdevelopment, inadequate technologies and market failures due prices which do not take into account environmental impacts, will have to be addressed.

Fifth, concerted efforts would need to be made to achieve a rapid and sustained transition to sustainable patterns of consumption, through green labelling and enlisting the support of consumers with the help of rigorous public awareness campaigns.

Last, Professor James Gustav Speth has urged that there is the need for the most fundamental transition of all – a transition in culture and consciousness and an environmental revolution for achieving the creation of a world society that is environmentally sustainable, economically equitable and peaceful. Speth has noted that there must also be a deeper change, a different way of seeing ourselves in relation to the planet on which we live. For this, he adds aptly, we would need an international movement of citizens and scientists, one capable of dramatically advancing the political and personal changes needed.[38]

[38] Gus Speth, *Red Sky at Morning: America and the Crisis of the Global Environment* (Yale, 2004).

THE CONCEPT OF SUSTAINABLE DEVELOPMENT: FROM THEORY TO PRACTICE[1]

Donald Kaniaru[2]

Introductory Remarks

The concept of sustainable development and its translation into concrete actions must obviously be of concern to all countries, whether developed or developing. There can be no debate about whether it should be more of a concern to one group of countries rather than to the other. This concern, however, must still be perceived in historical terms. Developed countries reached their current level of development at a considerable cost and not always sensitive to the rate at which resources within their reach were used. Resources, both renewable and non-renewable, were used voraciously and that previous industrial development may have used up more than its fair share of global common resources. Indeed, that pattern of development may also have produced more than its fair share of wastes, dumping these in so-called global common sinks. Thus, it is in order to ask the following questions: when, by whom and how was the risk of global warming created? How did we deplete the global ozone layer that protects us all from damaging ultra violet rays? The purpose of raising such questions and concerns is not to point an accusing finger, far from it. This would, in fact, clearly be counter-productive. On the other hand, I cannot argue that developing countries now pursue development patterns similar to those of the past, ignoring the grave consequences that would surely result for all of us. I believe it was Mahatma Gandhi who said 'If India should aspire to the same pattern of development as Britain, there will need to be the resources of thousands of Britains.' What I am suggesting, therefore, is that the concept of sustainable development is now able to provide a common agenda for both developed and developing countries. Indeed, it provides the only feasible basis for assured

[1] This paper is based on a lecture given by the author on 24 August 2004.

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common development. This pattern has been concisely encapsulated in the international debate on development by the phrase: Common agenda with differentiated responsibilities. The alternative, i.e. the patterns of development of traditional Western societies, could, if followed and emulated now by developing countries, only result in mutually assured under-development, perhaps even mutual destruction.

Sustainable development has thus given rise to a new pattern of internationalism. This pattern in turn gave rise to new impetus in the field of international environmental law. The two, sustainable development and international environmental law, have created a symbiosis. In the United Nations Environment Programme (UNEP), prior to the full development of the concept of sustainable development, the international environmental law programme was embryonic. With the consolidation of the sustainable development, it has grown and is still growing to new levels of importance.[3]

The concept offers different connotations depending on the expertise of the speaker: whether it is law, economics, sociology, ecology, politics, and so on. Many academics have given it much attention in the form of philosophical analysis and criticism. Every learned presentation begins with the definition offered in Our Common Future: 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'[4]

This broad understanding denotes development, equity, fairness, and growth in a world of so many poor across the globe. Estimates of people living in poverty range from between one-quarter and one-third of the global population of seven billion, the worst affected regions being in the developing world. In such a situation it is quite a challenge to realize sustainable development at the local, national, regional and global levels. However, the phrase still underlines all the right words and intentions. The Brundtland Report further acknowledged that

> In essence, sustainable development, addressed in its broadest context of social, economic and environmental spheres, is a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations.

As Hunter, Salzman and Zaelke comment, 'The Brundtland Commission did not invent the term sustainable development, but it popularized the term and placed it squarely in the centre of international policy-making.'[5] They add that partly because of its brilliant ambiguity the concept has received nearly universal acceptance among every sector of international society.

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[3] Observation by Naigzy Gebremedhin, former UNEP senior staff member.

[4] World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press, 1987), UN Doc. A/42/47 (1987)(The Brundtland Report).

[5] David Hunter, James Salzman and Durwood Zaelke, *International Environmental Law and Policy* (2nd ed., University Casebook Series: New York Foundation Press, 2002) at 180.

The concept itself and principles arising from it, having been endorsed by heads of state and government during the United Nations Conference on Environment and Development (UNCED) and thereafter in all major global and regional parleys, have become rallying points for all who address environment and development issues and efforts at their integration in decision-making, planning, development and management processes abound. UNCED additionally gave the concept political legitimacy[6] and unrivalled momentum through the 27 Principles of the Rio Declaration,[7] with no less than ten of them expressly mentioning sustainable development, Agenda 21,[8] the Declaration's companion blueprint document, the Forest Principles,[9] the Convention on Biological Diversity,[10] and United Nations Framework Convention on Climate Change.[11]

Some 17 years since the Brundtland Report defined the concept, however imprecisely, it is time to be pragmatic rather than theoretical or academic in approach in our dialogue, and I have assumed this posture in my remarks herein. Where, then, does this broadly undefined concept come from, and where does it find expression after 1987 – 1992? The following quick review will focus on selected milestones before 1987 and after 1992. It is recognized that in articulating the concept of sustainable development, each commentator in this area could place different emphasis on and draw attention to different nuances in the selected references.

[6] Elizabeth Dowdeswell, 'Preface', *UNEP's New Way Forward: Environmental Law and Sustainable Development* (UNEP, 1995), at x.

[7] Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

[8] *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

[9] Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. III), www.un.org/documents/ga/conf151/aconf15126-3annex3.htm.

[10] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, www.biodiv.org/doc/legal/cbd-en.pdf.

[11] United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

Before 1987 – selected milestones:

Although the Stockholm Declaration[12] did not expressly mention the term sustainable development, in at least one third of its 26 Principles it anticipated or implied the concept, in a visionary way, thus generally promoting future action on the subject. In value and vision, many academics applaud the Stockholm Declaration over the Rio Declaration. A series of expert discussions elaborating on relationships between the environment and development culminated in the Founex Report,[13] which sought to reconcile environment and development. In the 1974 Cocoyoc Declaration,[14] UNEP and the United Nations Conference on Trade and Development (UNCTAD) focused on poverty alleviation and held a series of regional meetings on consumption patterns. The point to be made here, however, is that the Cocoyoc outcomes were not followed up; a fate that has tended to befall many recommendations of global and regional fora.

As noted by HE Judge Christopher G. Weeramantry, Vice-President of the International Court of Justice (ICJ), sustainable development is not a new concept. This position was made clear in his keynote address, Sustainable Development: An Ancient Concept Recently Revived, given at the Regional Symposium on the Role of the Judiciary in Promoting the Rule of Law in the area of Sustainable Development, held in Colombo in July 1997, to which UNEP had invited him. In September 1997, barely two months later, in the *Gabcikovo-Nagymaros* case,[15] in a Separate Opinion the Judge stated that 'sustainable development is thus not merely a principle of modern international law. It is one of the most ancient of ideas in human heritage. Fortified by the rich insights that can be gained from millennia of human experience, it has an important part to play in the service of international law.'[16] The Judge reviewed various dimensions of the appreciation of the concept already thousands of years ago in Africa, in Australia among the Aborigines, in Asia and Sri Lanka, as well as among North American Indians. He observed, quite rightly, that 'the human family has learnt to live in harmony with the environment for thousands of years and has achieved this in a very successful manner. If we fail to look at the past for its traditional wisdom in facing our environmental problems, we may be depriving ourselves of this very important source of wisdom.'

[12] Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503.

[13] *The Founex Report on Development and Environment* (1971), www.southcentre.org/publications/conundrum/conundrum-04.htm#P266_67285.

[14] The Cocoyoc Declaration, Cocoyoc, Mexico, www.southcentre.org/publications/conundrum/conundrum-06.htm#P719_166711.

[15] *Gabcikovo-Nagymaros Project (Hungary/Slovakia), ICJ Reports* (1997) 7, Separate opinion of Vice-President Weeramantry at 88, www.icj-cij.org/icjwww/idocket/ihs/ihsjudgement/ihs_ijudgment_970925_frame.htm.

[16] Cited in Hunter, Salzman, and Zaelke, *International Environmental Law*, *supra* note 5, at 346.

In Mostafa K. Tolba's *Sustainable Development Constraints and Opportunities*,[17] which contains his statements from the period 1982 – 1986, the interlinkage of 'environment and development', 'environmentally sound development' and 'sustainable development' emerge. His preface, dated February 1987, noted that 'taken together the main thread binding all my statements presented….is the fact that long-term development can only be achieved through sound environmental management, that is, sustainable development.' Commenting on the relationship between the environment and development since the 1960s, he noted that past practices and beliefs had changed dramatically: 'It is now clear that without environmental protection, it is not possible to have sustained development, and without development, it is not possible to have a high quality of our environment and an improved quality of life for all the world's citizens. Thus, what we need is sustainable development, that is, development that can be sustainable over the long-term by explicitly considering the various environmental factors on which the very process of development is based.'

Some milestones after 1992

Today, literature on sustainable development is prolific and each of us could provide an ample list. A few sources are mentioned below. Chapter one of Mostafa K. Tolba's, *A Commitment to the Future – Sustainable Development and Environmental Protection*,[18] focuses on the compatibility between environment and development. The author recalls the *Founex Report*, the Stockholm Declaration 1972, *Choosing the Options*[19]and the International Development Strategy for the 3rd UN Development Decade.[20]

Several global and regional conferences – within and without the United Nations system – have taken place since 1992. These include the 1994 Barbados Global Conference on the Sustainable Development of Small Island Developing States; the 1994 Cairo United Nations International Conference on Population and Development, the 1995 Copenhagen World Summit on Social Development. Also noteworthy are the five and ten year reviews of UNCED by the 1997 19th UN General Assembly Special Session and by the 2002 World Summit on Sustainable Development (WSSD), respectively. In both these reviews of Agenda 21, concern on the lack of progress in the implementation of the Rio blueprint was conspicuous. Indeed, at WSSD new emphasis was predictably placed on implementation.

[17] Mostafa K. Tolba, *Sustainable Development Constraints and Opportunities* (Butterworths: London, 1987).

[18] Mostafa K. Tolba, *A Commitment to the Future – Sustainable Development and Environmental Protection* (UNEP, 1992).

[19] United Nations Environment Programme, *Choosing the Options: Alternative Lifestyles and Development Patterns (UNEP, 1980).*

[20] International Development Strategy for the Third United Nations Development Decade, GA Res. 35/56, 5 December 1980, www.un.org/documents/ga/res/35/a35r56e.pdf.

A few leading authors and publicists of academic books and publications also deserve mention: these include previously cited Hunter, Salzman and Durwood as well as Philippe Sands, prolific author of, for example, *Environmental Protection in the 21st Century: Sustainable Development and International Law*.[21] A few key publications by institutions and organizations can also be singled out: UNEP's three *Global Environment Outlook* (GEO) reports;[22] *UNEP's New Way Forward*;[23] and IUCN's 1995 International Covenant on Environment and Development, revised in 2003, which is an umbrella global instrument on sustainable development.

The ICJ also provided some legal clarification of the principle of sustainable development through the Separate Opinion of Vice-President Weeramantry.[24] Moreover, judicial sensitization has been addressed at regional, sub-regional and global symposia on the Role of the Judiciary in Promoting the Rule of Law in the Area of Sustainable Development, which have taken place in virtually all regions.[25]

It should be noted that earlier global and regional conferences and efforts mostly involved only the executive branch of governments; to some extent parliaments where involved in voting resources for global and regional parleys and ratifying conventions and involvement in the governing bodies of intergovernmental organizations. It was not until late 1996 that the judiciary at the regional and global levels became deliberately sensitized to environmental matters – primarily to the credit of UNEP. Since this period a lot of national judicial activity has taken place in many countries and in all regions, followed by the extensive sharing of law reports and guidelines for use by the judiciary and legal practitioners at the national level.

In Practice: Sustainable Development Applied

The levels of discussion and negotiation of the concept of sustainable development have been myriad. The concept has been addressed globally in academic circles, by diplomats at conferences and other intergovernmental fora and within global and regional non-governmental organizations (NGOs); at the national level it has been addressed in integrating decision-making, in institutional review and restructuring and in law-making and application. The high watermark, however, was the overwhelming global

[21] Philippe Sands, 'Environmental Protection in the 21st Century: Sustainable Development and International Law', in Richard L. Revesz, Phillippe Sands and Richard B. Stewart (eds), *Environmental Law, the Economy and Sustainable Development: the United States, the European Union and the International Community* (Cambridge University Press, 2000).

[22] See www.unep.org/Geo/index.htm.

[23] Dowdeswell, *New Way Forward*, *supra* note 6.

[24] *Gabcikovo-Nagymaros Project*, *supra* note 15.

[25] See the section on 'Judicial Input' below.

endorsement in Rio by over 100 heads of state and government of the sustainable development menu, and its subsequent reinforcement in various fora and instruments, both binding and non-binding. These are summarized below.

Global treaties and negotiations

Sustainable development principles find expression in the preamble(s) and in the operative articles of numerous global, regional and subregional conventions, treaties and protocols. In some instruments, reference is made in the preamble to the entire Rio Declaration without specifying a particular aspect of the Declaration. For example, Recital 2 of the Preamble of the Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade[26] recalls 'the pertinent provisions of the Rio Declaration.' In other treaties, sustainable development principles are not only recognized in preambles but in one or more articles. Examples of this may be found in Articles 2 and 3 of the United Nations Framework Convention on Climate Change,[27] in the Preamble and Articles 1 and 10 of the Convention on Biological Diversity,[28] and in the Preamble and Article 9(1) of the United Nations Convention to Combat Desertification.[29]

As mentioned above, no less than ten principles are themselves integral to sustainable development, and these find, individually or severally, express reference and endorsement in many treaties. These include the polluter pays principle; the precautionary principle or approach; international co-operation; inter-generational equity, etc., all adding to due recognition and endorsement of the broader principle of sustainable development.

Regional treaties

The Rio Principles are also applied in legally-binding regional instruments including in the Preamble of the North America Free Trade Agreement,[30] in Article 2 of the Treaty on European Union,[31] and in the African Union's 2003 African Convention on

[26] Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam, 11 September 1998, in force 24 February 2004, 38 *International Legal Materials* (1999) 1, www.pic.int/en/ViewPage.asp?id=104.

[27] Climate Change Convention, s*upra* note 11.

[28] Biodiversity Convention, s*upra* note 10.

[29] United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, Paris, 17 June 1994, in force 26 December 1996, 33 *International Legal Materials* (1994) 1309, www.unccd.int/convention/menu.php.

[30] North American Free Trade Agreement, 8 and 17 December 1992, Washington D.C., 11 and 17 December 1992, Ottawa, 14 and 17 December 1992, Mexico City, in force 1 January 1994, 32 *International Legal Materials* (1993) 1480, www.nafta-sec-alena.org/DefaultSite/index_e.aspx?DetailID=78.

[31] Consolidated Version of the Treaty on European Union, *OJ* 2002 No. C325, www.europa.eu.int/eur-lex/lex/en/treaties/index.htm.

the Conservation of Nature and Natural Resources,[32] which updated the 1968 Algiers Convention[33] on the same subject, making the revised convention the most comprehensive regional biodiversity convention.

There has also been the elaboration of specific instruments based on specific Rio Principles. For example, Principle 10 has been developed in the Aarhus Convention.[34] Although this instrument is essentially designed for the United Nations Economic Commission for Europe (UNECE) region, per Article 19(3), it is also open to states outside the UNECE region, and an informed expert, Professor Marc Pallemaerts is firmly of the opinion that states from other regions can currently be accommodated straightforwardly through accession. Two states, Uganda and Mexico, may be among the first from outside the UNECE region to become parties.

Principle 10 is, however, widely applied elsewhere through strategy and policy documents by the Inter-American Development Bank, for example, as well as across all regions through other legally-binding regional and subregional conventions. Upon adoption, the Convention was shared with regional commissions by UNECE's Executive Secretary as well as by UNEP's Executive Director whose unit, Infoterra, was fully involved in the discussions leading to the Convention as well as during its negotiation. In fact, in 1999 the Executive Director brought the Convention to the attention of the Governing Council which was not enthusiastic about moving in the direction of a global convention on Principle 10. It did, however, encourage UNEP to review the practice of different countries and regions. This led to a report to the Council in 2001. UNEP also invited the Director of UNECE, Kaj Bärlund, former Finnish Minister of the Environment, to the Southeast Asia Judges Symposium held in Manila in 1999, to discuss the instrument, which the meeting subsequently embraced and commended. In Africa, the Southern Africa Development Community (SADC), with financing by Ireland, studied the Aarhus approach during the Aarhus negotiations themselves, and thereafter in Gaborone in December 1998. At the national level, about 38 African states have incorporated Principle 10 in national statutes or constitutional provisions.[35]

[32] African Convention on the Conservation of Nature and Natural Resources (Revised Version), Maputo, 11 July 2003, not yet in force, www.africa-union.org/home/Welcome.htm.

[33] African Convention on the Conservation of Nature and Natural Resources, Algiers, 15 September 1968, in force 16 June 1969, 1001 *United Nations Treaty Series* 4, www.africa-union.org/home/Welcome.htm.

[34] Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters, Aarhus, 25 June 1998, in force 30 October 2001, 38 *International Legal Materials* (1999) 517, www.unece.org/env/pp/documents/cep43e.pdf.

[35] See UNEP-PADELIA, *Compendium of Environmental Laws of African Countries,* www.unep.org/padelia/publications/laws.html; and UNEP-PADELIA, *Compendium of Environmental Provisions in African Constitutions* (forthcoming).

Judicial input

In the *Gabcikovo-Naygmaros* case,[36] the ICJ lost an opportunity to elaborate on and apply the principle of sustainable development; it only mentioned the matter in paragraph 140. However, the Vice-President of the Court, Christopher Weeramantry, took the opportunity to elaborate on the content of the principle in a Separate Opinion. This is bound to open new avenues and horizons for regional and national jurisdictions to expound the principle judicially.

There have been no less than ten judicial symposia - one global and the rest regional - in which judges have taken up or will take up the challenge of applying the set of sustainable development principles. Africa led the way with the first symposium being held in Mombasa, Kenya. Further symposia have been held in South Asia, South-east Asia, Australia and other regions. The symposia were first spearheaded by UNEP. Other organizations, independently or with UNEP, have since then carried out or have planned symposia with a focus on environmental law in the context of sustainable development and on the role and rule of law.[37] Regional courts have played a role in applying the principle of sustainable development as well. Discernible judicial efforts can also be seen at the national level in all regions in countries such as India, Pakistan, the Philippines, Australia, New Zealand, Uganda, Malawi, South Africa, Canada, Italy, etc. Judicial handbooks as well as casebooks and reports are available from or are under preparation by UNEP, and Uganda and other countries. These include: *Judges Handbook on Environmental Law*;[38] *Compendium of Judicial Decisions on Matters Related to Environment*;[39] volumes I & II of *Reports of Global Judges Symposium on Sustainable Development and the Role of Law*.[40] National publications include: *Casebook on Environmental Law in Uganda* as well as *Handbook on the Practice of Environmental Law in Uganda*, Volume I, both published in 2003.

[36] *Gabcikovo-Nagymaros Project*, *supra* note 15.

[37] Symposia have been held in Mombasa in 1996; in Colombo in 1997; in Manila in 1999; in Mexico in 2000; in Johannesburg in 2002 with a follow-up in London the same year; in Kuwait in 2002; in Kiev in 2003; in Nairobi in 2003; in Cairo in 2004; and in Washington D.C. in 2004.

[38] UNEP, *Judges Handbook on Environmental Law*, (forthcoming).

[39] UNEP/UNDP, *Compendium of Judicial Decisions on Matters Related to Environment*, International Decisions: Volume I (1998); National Decisions: Volume I (1998), Volumes II-III (2001), www.unep.org/padelia/publications/judicial.html.

[40] UNEP, *Reports of Global Judges Symposium on Sustainable Development and the Role of Law*, Volumes I-II (UNEP, 2002).

Application at the national level

Policy instruments are widespread, and include national Agenda 21 documents, derived from the UNCED Agenda 21, and National Action Plans and Sustainable Development strategies as in the United Kingdom and Canada, to name but a few countries. Policy dialogue vis-à-vis policy action, or inaction, is often taken up by the media and NGOs to put pressure on governments to take action to ratify or accede to conventions, or to institute administrative and legal measures, for example. Institutional reviews and restructuring also take place as a means of implementing law and policy.

Many national constitutions such as those in Uganda and South Africa, or in the draft constitution of Kenya, include legal provisions surrounding sustainable development principles. Specific statutes are also often found in framework legislation in developing countries. Examples include the Ugandan National Environment Act;[41] the South African National Environment Management Act;[42] and the Kenyan Environmental Management and Co-ordination Act, No 8, of 1999, which came into effect in 2000. In the case of Kenya, sustainable development is defined similarly to Uganda, but Section 3 of the Act pools together several principles into one sustainable development principle. The six that shall guide the High Court in exercising jurisdiction conferred upon under subsection (*5*) are:

a) the principle of public participation in the development of policies, plans and processes for the management of the environment;
b) *the cultural and social principles traditionally applied by any community in Kenya for the management of the environment or natural resources in so far as the same are relevant and are not repugnant to justice and morality or inconsistent with any written law;*
c) the principle of international co-operation in the management of environmental resources shared by two or more states;
d) the principles of intergenerational and intragenerational equity;
e) the polluter-pays principle; and
f) the precautionary principle.[43]

Many other framework laws with which UNEP has provided assistance have followed this trend.

[41] Chapter 153, National Environment Act, *Republic of Uganda: Environmental Legislation of Uganda*, Volume I 5-1.

[42] South African National Environmental Management Act 107 of 1998, www.polity.org.za/html/govdocs/legislation/1998/act98-107.html.

[43] Section 3(5), Kenyan Environmental Management and Co-ordination Act, No. 8 of 1999 (emphasis added).

Application by international institutions

The goals of sustainable development have been accepted and championed in the programmes and efforts of both the UN and non-UN organizations within their respective global, regional and national mandates, where they are primary players. Within the UN family these include the UN and organs such and the United Nations Development Programme (UNDP), the United Nations Environment Programme (UNEP), the United Nations Industrial Development Organization (UNIDO), the United Nations Conference on Trade and Development (UNCTAD), etc. UN specialized agencies to take up this challenge include the Food and Agricultural Organization (FAO), the United Nations Educational, Scientific and Cultural Organization (UNESCO), The World Bank Group, regional development banks, and UN Regional Economic and Social Commissions. Non-UN organizations which have taken up this challenge include the IUCN and regional organizations like the European Union and the African Union.[44]

Conclusion

The content and definition of sustainable development is not closed and will not close in the foreseeable future. The principle and concept can be said to be vague; 'brilliantly vague.' This permits the definition and application of sustainable development to be tailored to specific situations and circumstances. At the local level the state of knowledge, experience and resources will always be key, and local cultural and social values should be integrated into sustainable development legislation. Further insight can be gained from local experience of centuries of sustainable living in tough desert environments, for example. Vagueness in interpretation will therefore remain a positive attribute of the concept, giving it life in different situations and circumstances.

The concept has been widely embraced and championed worldwide and its application or implementation should be monitored and experiences should be shared. Despite their best endeavours, no country can claim to be a role model and an ideal example of sustainable development in practice. None can claim total harmony in the integration and application of sustainable development in development, planning and decision-making. In fact, no society has yet reached its apex in its understanding and application of the concept despite the fact that aspirations to concretize the concept abound and are held by many. In this regard all have a contribution to make to translate these sentiments into action.

[44] Formerly the Organization of African Unity.

At the 6th UNEP Global Training Programme on Environmental Policy and Law, held in Nairobi in November 2003, Professor Alexander Kiss presented 'legal tools implementing the policies adopted for enhancing sustainable development.' These are international conventions; constitutional rules; framework laws; laws concerning basic services such as water and sanitation, energy, transport, health care, town and country planning, etc.; laws concerning specific environmental sectors such as water, sea, air and biodiversity and specific sources of environmental deterioration such as polluting substances, wastes, nuclear material, etc.; regulations adopted at different levels – national, regional, subregional – following the principle of subsidiarity, and implementing of such laws or framing economic instruments; and judicial decisions.

Work at the national level should heed the sound advice given by such an experienced environmental lawyer as Professor Kiss. These challenge and opportunities should be addressed; each of the over thirty countries represented at the UNEP – University of Joensuu Course has a golden chance of playing their full part in actualising sustainable development.

SUSTAINABLE DEVELOPMENT GOVERNANCE CHALLENGES IN THE NEW MILLENNIUM[1]

Johannah Bernstein[2]

Sustainable Development Governance Challenges

Effective sustainable development governance at all levels is key to the realization of the goals of sustainable development. Creating governance systems to address the multiple challenges of sustainable development constitutes one of the most pressing issues in the period following the World Summit on Sustainable Development (WSSD). Indeed, confronting the new generation of global sustainable development problems gives rise to new challenges for forging global co-operation and co-ordination at all levels and between a number of sectors.

Sustainable development governance architecture, loosely defined, is the complex web of institutions, legal regimes and other arrangements that define policy agendas, norms and rules with respect to the three pillars of sustainable development. It is interesting to note at the outset how the terminology has changed. At the Third Summit Preparatory Committee of the WSSD (PrepCom 3) Vice-Chairs Ambassadors Ositadinma Anaedu and Lars-Goran Engfeldt explicitly used the term sustainable development governance. By contrast, Chapter XI of the Johannesburg Plan of Implementation[3] avoids the term and instead makes reference to 'strengthening the international framework for sustainable development.'

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[1] This paper was drawn from a discussion paper which the author prepared for the Ministry of Foreign Affairs of Finland as part of an ongoing project on sustainable development governance and from a paper which the author and Desiree McGraw prepared for Environment Canada. It was provided as background material for a lecture entitled 'The Art and Governance of Sustainable Development Negotiations', held by the author on 2 September 2004. For the full briefing book given to participants as well as the Ministry of Foreign Affairs discussion paper, see www.joensuu.fi/unep/envlaw/index.html.

[2] Environmental Law and Policy Consulting, Brussels, Belgium.

[3] World Summit on Sustainable Development (WSSD), *Johannesburg Plan of Implementation*, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm (hereinafter Johannesburg Plan).

In all its myriad forms, there is no question that the sustainable development governance architecture must be strengthened at all levels. However, reform measures are just as diverse and far-reaching as the scope of sustainable development challenges itself. At PrepCom 3, Vice-Chairs Anaedu and Engfeldt identified the actions that would be required to strengthen sustainable development governance at the international level. These included integrating the three dimensions of sustainable development; ensuring coherence and consistency in policy formulation; promoting transparency and participation; strengthening policy formulation and co-ordination; integrating sustainable development priorities into macroeconomic policies; reforming structures and processes of international finance and trade institutions; and promoting fair and equitable participation in the World Trade Organization (WTO). Set against this backdrop, it becomes clear that international environmental governance reform is but one necessary albeit important piece in the overall sustainable development governance challenge.

In their 2001 position paper, the Third World Network asserted that the integration of sustainable development has been largely inadequate. First, the integration of environmental concerns in development has not occurred as anticipated. Second, the development dimension has not been properly integrated in the substantive work of the Commission on Sustainable Development (CSD) or in the implementation of multilateral environmental agreements (MEAs). The Third World Network asserted that unless we deal with the development dimension, the environment will not be adequately protected nor will natural resources be managed sustainably. Moreover, there is a need to ensure that WTO agreements and the Bretton Woods institutions are supportive of sustainable development

As agreed at the 11th Session of the Commission on Sustainable Development (CSD-11), the CSD now functions on the basis of two-year Implementation Cycles, each cycle focusing on a key thematic cluster of issues. The first year of each cycle – the Review year – will evaluate progress made in implementing sustainable development commitments made in Agenda 21,[4] the Programme for the Further Implementation of Agenda 21,[5] the Johannesburg Plan of Implementation, and relevant CSD sessions, and will focus on identifying obstacles and constraints. The second year – the Policy year – will decide on measures to speed up implementation and mobilize action to overcome obstacles and constraints, and build on lessons learned. While it is clearly too early to assess the effectiveness of the CSD's new organization of work it is, however, useful to revisit some of the key priorities and concerns that were raised by Ministers at the High-Level Segment of CSD-11 regarding the long-term role of the CSD.

[4] *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

[5] Programme for the Further Implementation of Agenda 21, GA Res. S/19-2, 28 June 1997, www.un.org/documents/ga/res/spec/aress19-2.htm.

Key points are summarized accordingly: the unique role and mandate of the CSD as the only high-level UN body to facilitate accelerated implementation of sustainable development should be re-affirmed; the CSD is well-placed as a forum for co-ordination and integration and should add value to the implementing organs and agencies of the UN system; there is a mutual benefit from an improved, action-oriented CSD work programme and better integration at the country level; the CSD should be used as the global forum to exchange knowledge and experiences as well as best practice as regards the assessment of progress, emerging issues, opportunities and threats; the high-level segment of the CSD is important to ensure government leadership and commitment at the highest level, as well as to set the political tone for the substantive sessions. The high-level segments should be interactive and focused, leading to action-oriented recommendations that would enhance implementation; increased attention should be directed at the regional level as well, with support for the concept of Regional Implementation Forums, in which partnerships can be developed to deliver the WSSD and Millennium Development Goal (MDG) outcomes; the engagement of civil society in the CSD should be strengthened with particular attention directed towards ensuring a better balance of major groups from both the North and the South; the CSD should improve its co-ordination with UN agencies, the Bretton Woods institutions and the WTO, to ensure the strengthening of synergies among these bodies.

ECOSOC's evolving role in light of the key reform recommendations outlined above has been addressed in a number of important processes. For example, in December 2003, the UN General Assembly's Second Committee adopted a draft resolution that specifically calls upon ECOSOC to enhance its interactions through regular exchanges with the Bretton Woods institutions, WTO and UNCTAD on matters related to the Monterrey follow-up.

More recently, in Resolution 57/270[6] the UN General Assembly identified a number of key functions to be undertaken by ECOSOC in regard to the integrated and co-ordinated implementation and follow-up of the global summits. These include the following: ECOSOC should continue to strengthen its role as the central mechanism for system-wide co-ordination and to promote co-ordinated follow-up to the outcomes of major UN conferences in the economic, social and related fields; an open-ended ad hoc working group was established to address issues related to the work of the intergovernmental bodies in the follow-up to major conferences and to assess how to ensure a well co-ordinated and integrated examination of the key issues addressed by these conferences; the functional commissions should enhance their role as the main forums for expert follow-up and review of the major conferences and summits.

[6] Integrated and co-ordinated implementation of and follow-up to the outcomes of the major United Nations conferences and summits in the economic and social fields, GA Res. 57/270A, 20 December 2003 and GA Res. 57/270B, 23 June 2003.

International Environmental Governance Challenges and Weaknesses

There is a growing consensus that current approaches to international environmental governance are inadequate. While international action has focused primarily on transboundary issues, there is a critical need to evolve institutions towards a coherent and integrated framework that addresses individual challenges in the context of the global ecosystem.

The existing machinery remains terribly fragmented and often has vague mandates, inadequate resources and marginal political support. This growing lack of coherence and co-ordination among international agreements and institutions now poses a major impediment to global sustainable development. Moreover, the growing number of environmental institutions, issues and agreements are themselves placing stress on current systems and on our ability to manage them. This increase also threatens to reduce the participation of developing countries, which are not always equipped to participate in the development and implementation of international environmental policy.

The International Environmental Governance (IEG) process of the United Nations Environment Programme's (UNEP) highlights the extent to which the system of international environmental governance fails to address and respond to new and emerging global environmental threats. The institutional weaknesses have been well documented. Key problems include fragmentation, lack of coherence, weak enforcement, duplication and overlap, failed collective action, deficient expertise and authority, lack of adaptability and flexibility, limitations of consensus-based decision-making, inadequate dispute settlement mechanisms, and ineffective compliance monitoring and reporting.

While the number and range of international environmental institutions has grown steadily in the last 25 years, the focus must be directed to the challenges of implementation, compliance and enforcement, all of which remain underdeveloped. Of course the basic premise for charting a new course for strengthening the international institutional machinery is that existing institutions do not adequately address current and future needs.

Responsiveness of Global Governance to Sustainable Development

The realization of global sustainable development goals and principles will require not only renewed political support and the increased commitment of key global actors, but the strengthening of global institutions as well. In their final report published in February 2004,[7] the International Labour Organization (ILO) World Commission on the Social Dimension of Globalization identified fundamental problems with the current structure and processes of global governance, which in turn have contributed to the uneven social and economic impacts of globalization.

The Commission argues that the most critical problem is the vast inequality in the economic power of nations, which translates into imbalanced playing fields in the global governance arena creating a built-in tendency for the process of global governance to be dominated by the interests of the most powerful states. The Commission asserts that these inequalities are reflected in the democratic deficits that currently characterize global governance and which are most evident in the case of the UN Security Council and the Bretton Woods institutions. Moreover, developing countries face a wide range of handicaps in making their influence felt in global governance, particularly in light of the increasing technical complexity and multiplicity of multilateral negotiations. The Commission further asserts that these problems are compounded by the low democratic accountability and transparency in the process of global governance, whereby the positions taken by governments in international arenas are rarely scrutinized by national parliaments. The final problem highlighted by the Commission is the lack of coherence in global decision-making whereby negotiations on global governance take place in highly compartmentalized sectors such as trade, finance, health, social affairs or development assistance, with processes often working at cross purposes.

Given the expanding sustainable development agenda and the fragmented approach to international action, the international community must consider whether the existing institutional machinery can respond sufficiently to the global challenges of the new millennium. The United Nations Secretary-General has raised a number of important questions regarding the broader UN reform challenge and the need to ensure that international institutions can deliver on key sustainable development commitments, namely will it be sufficient to exhort states and individuals to forge stronger international solidarity and responsibility, or will a radical reform of the international institutional architecture also be needed? Another central challenge that the Secretary-General has raised is how to move the reform agenda beyond the useful but managerial changes

[7] World Commission on the Social Dimensions of Globalization, *A Fair Globalization: Creating Opportunities for All* (ILO: Geneva, 2004), www.ilo.org/public/english/fairglobalization/report/index.htm.

being made, and how to bring to the fore some of the more fundamental questions that pertain to the way in which decisions are made, and indeed the adequacy or efficiency of the key decision-making bodies.

In the Globalization and Governance chapter of the Millennium Report,[8] UN Secretary-General Kofi Annan outlined the key political challenges that must be addressed together with the institutional reforms needed to ensure the transition from an international to a global world. The United Nations must play a stronger role in ensuring that globalization provides benefits for all member states and in brokering among states the differences in power, culture, size and interest, serving as the forum where the cause of common humanity is advanced. Stronger systems of global governance must be grounded in a robust international legal order which, together with the principles and practices of multilateralism, are needed to define the ground rules of an emerging global civilization. Decision-making structures through which governance is exercised internationally must reflect the broad realities of our time. This relates in particular to the reforms needed to ensure that the Security Council and key economic forums better represent the needs of a globalized world. Better governance means greater participation, coupled with accountability. Therefore the international public domain, including the UN, must be opened up further to the participation of non-state actors. The more integrated global context also demands a new degree of policy coherence, while important gaps must be filled. The international financial architecture and the multilateral trade regime require strengthening. However, greater consistency must be achieved among macroeconomic trade, aid and financial and environmental policies to ensure the common aim of expanding the benefits of globalization.

The Intergovernmental Commitments for Reform

Key WSSD recommendations for sustainable development governance reform

Chapter XI of the Johannesburg Plan of Implementation[9] sends a clear message that strengthened international institutional frameworks are essential for the full operationalization of MEAs, and more broadly, the realization of sustainable development. At the outset, it is particularly important to note that Section C calls upon the General Assembly to adopt sustainable development as a key element of the framework for UN activities, especially for achieving the Millennium Development Goals (MDGs).

[8] Millennium Report of the Secretary-General of the United Nations, *We the Peoples: the Role of the United Nations in the 21st Century*, (UN, 2000), www.un.org/millennium/sg/report/index.html.

[9] WSSD, *Johannesburg Plan*, *supra* note 3.

Section A of Chapter XI sets out the key objectives to be considered in strengthening international institutions on sustainable development. The principal way in which sustainable development commitments can be strengthened is through the increased integration of Agenda 21 and WSSD outcomes into the policies, work programmes and operational guidelines of relevant United Nations agencies, programmes and funds, as well as of the international financial and trade institutions.[10] Chapter XI calls for the General Assembly to adopt the concept of sustainable development as the overarching framework for UN activities.

The economic, social and environmental dimensions should be integrated in a balanced manner.[11] It is interesting to note that the Johannesburg Declaration on Sustainable Development acknowledges the collective responsibility of the international community to 'advance and strengthen the interdependent and mutually reinforcing pillars of sustainable development – economic development, social development and environmental protection.'[12] Moreover, the need for particular attention to be given to strengthening the social dimension of sustainable development is specifically highlighted.[13] Integration is also addressed in terms of the enhanced co-operation that is called for between the UN system and the international financial institutions.

The strengthening of coherence, co-ordination and monitoring is called for.[14] In this respect the mandates and functions of the various bodies within the international governance architecture will have to be realigned with better linkages defined among them. In particular, this will involve closer relationships between the United Nations and the Bretton Woods institutions with respect to economic, financial and monetary issues that impact on the political, social and environmental fields for which the UN is the primary forum.

While the importance of the rule of law is highlighted as an objective to guide governance reform, it is silent as to scope and substance of this principle.[15] The rule of law is generally understood as a principle that relates to the scope of the authority of governance systems. The rule of law is part of a system of checks and balances to prevent the arbitrary, unlimited, or discretionary exercise of power or authority. It requires the authority and power of governance systems to be limited to those spheres, issues and actions that are specified by law. The rule of law also requires decision-making processes to be grounded in a fair, non-discriminatory and objective rule-based system, and to be

[10] Paragraph 139(a), *ibid.*

[11] Paragraph 139(b), *ibid.*

[12] Paragraph 5, World Summit an Sustainable Development *Johannesburg Declaration on Sustainable Development*, 4 September 2002, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POI_PD.htm

[13] Chapter XI, WSSD, *Johannesburg Plan*, *supra* note 3.

[14] Paragraph 130(d), *ibid.*

[15] Paragraph 139(e), *ibid.*

accompanied by an impartial system of enforcement. An important principle related to the rule of law is accountability, which requires governance systems to be answerable and responsible to the constituents that they serve.

Reference is made to the importance of increasing effectiveness and efficiency through limiting overlap and duplication of activities of international organizations within the United Nations and in relation to other bodies such as the Bretton Woods institutions.[16] Effectiveness and efficiency are also dependent on the achievement of greater integration and co-ordination of the economic, social and environmental dimensions of sustainable development. Finally, these principles relate to such objectives as flexibility and adaptability, which enable international environmental governance systems to respond to unforeseen events and new scientific discoveries.

The enhancing of participation and the effective involvement of civil society and other key stakeholders in the implementation of Agenda 21, as well as promoting transparency and broad public participation is called for.[17] In his 2002 report on Strengthening the United Nations,[18] the Secretary-General called for the establishment of a high-level panel that would assess how best to engage civil society in the United Nations. A major objective of the Panel's work will be to develop a new mode of working as a foundation for how the UN evolves in its relations with civil society and other non-government actors. Moreover, the strengthening of sustainable development at all levels, in particular in developing countries, is called for.[19]

Section B of Chapter XI outlines a range of measures that should be undertaken by the international community to strengthen the institutional framework for sustainable development at the international level. Some of the key recommendations include enhanced integration of sustainable development goals into the policies, programmes and operational guidelines of all the UN agencies and the Bretton Woods institutions; strengthened collaboration within and between the UN and the international financial institutions; improved integration of the three pillars of sustainable development; promotion of corporate responsibility and accountability; implementation of the Monterrey Consensus at all levels; and promotion of good governance within the international finance and trade institutions.

[16] Paragraph 139(f), *ibid.*

[17] Paragraph 139(g), *ibid.*

[18] *Strengthening of the United Nations*, *infra* note 26.

[19] Paragraph 139(h), *Johannesburg Plan*, supra note 3.

UN Millennium Declaration recommendations for governance reform

One of the central messages of the UN Millennium Declaration[20] was the importance of ensuring that globalization becomes a positive force for all of the world's people. Section I: Values and Principles, notes that developing countries and countries with economies in transition face special difficulties in responding to the globalization challenge. As a result, the international community is called upon to forge broad and sustained efforts to create a 'shared future, based on our common humanity in all its diversity' in order to ensure that globalization be made fully inclusive and equitable. This challenge requires the development of policies and measures at the global level which better respond to the needs of developing countries and which are formulated with their effective participation.

As regards the global governance challenge, Section VIII: Strengthening the United Nations, contains a number of important recommendations for advancing the international institutional reform agenda. These are highlighted as follows: reaffirm and enhance the effectiveness of the central position of the General Assembly as the chief deliberative, policy-making and representative organ of the UN; intensify comprehensive reform of the Security Council; continue strengthening the position of ECOSOC, to help fulfil the role ascribed to it in the Charter; strengthen the International Court of Justice to ensure justice and the rule of law in international affairs; encourage regular consultations and co-ordination among the principal UN organs; ensure timely and predictable funding of the UN; ensure greater policy coherence and better co-ordination between the UN and the Bretton Woods institutions and the WTO; and enhance participation of non-state actors to contribute to the realization of the UN's goals and programmes.

UNEP Reform Process

In its 13 January 2004 report to the 8th Special Session of the Governing Council/ Global Ministerial Environment Forum (GC/GMEF), UNEP outlined a summary of actions proposed or taken on international environmental governance in light of decision SS.VII/I and the Open-Ended Groups' recommendations.[21] These issues were addressed by the 8th Special Session of the GC/GMEF, which took place from 29-31 March 2004 in Jeju, the Republic of Korea.[22]

[20] United Nations Millennium Declaration, GA Res. 55/2, 8 September 2000.

[21] See also *International Environmental Governance*, UNEP/GCSS.VII/2, 27 December 2001, www.unep.org/GC/GCSS-VII/.

[22] For the Notification and Working Documents of the 8th Special Session see www.unep.org/GC/GCSS-VIII/working_docs.asp.

Key arguments in support of universal membership of the Governing Council include the following: universal membership is fundamental to ensure that UNEP benefits from structures that are fully open, transparent and participatory for all member states; and universal membership legitimizes the results of the decision-making process and empowers UNEP with the necessary level of authority and means to implement its functions as the global environmental authority. Member states opposed to universal membership argue that universal composition already exists within the UNEP Governing Council and has been working adequately. The only restriction is that non-members of the GC cannot participate in its voting sessions. Universal membership would also result in an important increase in UNEP's costs and would complicate decision-making processes within UNEP. The 8th Special Session of the GC/GMEF was unable to advance any consensus on the issue, in light of the variety and divergence of views. Instead, the GC simply called for the transmission of further views to the UN Secretary-General as input for his report to the UN General Assembly on this issue.

During negotiations, the EU's proposal for the establishment of an intergovernmental panel on global environmental change was objected to by the US, Japan and the G-77.[23] Member states opted for a simpler exploratory approach that will evaluate UNEP's polling of a broad range of official and scientific sources. The final decision of the 8th Special Session of the GC/GMEF requests the Executive Director to continue efforts to seek an increase in funding from all sources. During general debate, the EU called for the utilization of the indicative scale of contributions, noting the positive outcome of the pilot phase. The US and Japan have decided not to use the scale and stress instead the voluntary nature of contributions.

Among its key MEA activities, UNEP is facilitating pilot projects in four countries to test information management and harmonization concepts in the context of national reporting to the five global biodiversity-related conventions. Furthermore, in developing countries, UNEP is advancing capacity-building efforts to implement MEAs. To this end, UNEP is holding a series of regional training workshops on compliance with and enforcement of MEAs to review and test a manual it has developed on the UNEP Guidelines on Compliance and Enforcement of MEAs, which were adopted in 2002.[24] Moreover, UNEP is launching a major project on achieving synergies between conventions in Africa. The 8th Special Session of the GC/GMEF requested the Executive Director to continue to promote the recommendations of the GC/GMEF regarding the co-ordination and effectiveness of MEAs.

[23] See *International environmental governance: Synthesis of responses on strengthening the scientific base of the United Nations Environment Programme*, UNEP/GCSS.VIII/5/Add.3, www.unep.org/gc/gcss-viii/working_docs.asp.

[24] See the article by Elizabeth Maruma Mrema in the present review.

In response to UNEP IEG and WSSD decisions to revitalize the Environmental Management Group (EMG),[25] the Group has agreed that it should become an instrument for members to share views or concerns on issues of common interest, review progress, identify obstacles, set policy directions and convey views and recommendations to intergovernmental forums. As one of its immediate areas of focus, the EMG has undertaken a UN system-wide consultation on the implementation of the water agenda.

Global Governance Reform Processes

The UN Secretary-General's September 2002 report, *Strengthening of the United Nations: An Agenda for Further Change*,[26] marked the second stage of reform proposals since taking office in 1997. In the report, the Secretary-General asserted that if member states do indeed want a stronger United Nations, change in the intergovernmental organs will be a necessity. A few of his suggested reforms are summarized below.

The Secretary General indicated that the next stage of reform is based on the priorities laid out in the Millennium Declaration, including precise, time-bound development goals. They now serve as a common policy framework for the entire UN system. It is important that the United Nations General Assembly (UNGA) continue its own reform efforts to further rationalize its agenda. At present, it considers too many overlapping items and with a frequency that is ineffective. The Secretary-General called for duplicative items to be combined and for closely related issues to be clustered into a single discussion, leading to outcomes of greater policy relevance and impact. He also suggested that the UNGA should clarify its responsibilities vis-à-vis ECOSOC in relation to the follow-up of conferences, enabling the UNGA to build on and add value to the work of ECOSOC and its functional commissions. The growing role of the United Nations in forging consensus on globally important social and economic issues calls for a corresponding strengthening of the role played by ECOSOC. One of the most promising innovations has been ECOSOC's annual dialogue with the Bretton Woods institutions. However, the agenda and format of these dialogues must be more focused and the meetings better prepared.

Despite efforts of the Open-ended Working Group on Security Council reform, no formula has yet been developed that would allow an increase in Council membership. According to the Secretary-General, the perceived shortcomings in the Council's credibility in light of its size and composition contribute to a slow and steady erosion of its authority, which in turn has grave implications for international peace and security.

[25] See *Overview of progress on international environmental governance: Report of the work of the Environmental Management Group*, UNEP/GCSS.VIII/5/Add.2, www.unep.org/gc/gcss-viii/working_docs.asp.

[26] *Strengthening of the United Nations: An Agenda for Further Change*, UN Doc. A/57/387 (2002), www.un.org/reform/keydocs.html.

A reform process that consisted only of an increase in membership would be unlikely to strengthen the Council.

The Secretary-General called for the establishment of a high-level panel that would assess how best to engage civil society in the United Nations. A major objective of the Panel's work will be to develop a new mode of working as a foundation for how the UN evolves its relations with civil society and other non-government actors. In 2003, the Panel undertook consultations on key issues related to civil society engagement within the UN. Regional meetings have been undertaken and a set of papers has been commissioned as well. The Panel prepared its final report to the Secretary-General in April 2004. It contains recommendations designed to enhance the performance of the UN and addresses, in particular, the modalities for engaging the full weight of global civil society in the normative, policy-making work of the UN and other multilateral processes.

In November 2003, the Secretary-General established a high-level panel to provide a new assessment of the future challenges to international peace and security, to identify the contribution of collective action and to recommend the changes necessary to ensure effective collective action. The Panel's work will be directed to the field of peace and security but the Panel will extend its analysis and recommendations to other issues and institutions where they have a direct bearing on future threats to peace and security.

In response to the Monterrey Consensus,[27] the Bretton Woods institutions have publicly pledged to support the call for democratic governance reform of the international financial institutions. As a result, formal discussions have been carried out within the governing Boards of the World Bank and the IMF. In considering the issue, Bank staff produced a report – prepared for consideration by the joint IMF-World Bank ministerial steering committee at it's 2003 spring meeting – that suggested ways in which a small increase of a few percentage points in the votes of developing countries could be achieved and suggested the creation of a new Executive Board seat that would be assigned to sub-Saharan African countries. In spite of the modesty of the proposals, the US Bank Director not only rejected them, but also sought to put an end to any further discussion on the issue.

[27] Monterrey Consensus, International Conference on Financing for Development, Monterrey, 21-22 March 2002, A/CONF.198/11, www.un.org/esa/ffd/Monterrey-Consensus-excepts-aconf198_11.pdf.

Options for Reform

Options for Strengthening Existing Institutions

The Government of France has established an intergovernmental working group in New York to examine the possible upgrading of UNEP into a specialized agency, the United Nations Environment Organization (UNEO). The group will present an interim report to the UN Secretary-General prior to the preparation of the IEG report to be submitted to the General Assembly. By 2005, it will have prepared proposals with clear goals in the form of a non-paper to be co-sponsored by the group's members. The working group will consider three courses of action for the UNEO in the context of improving international environmental governance: (i) enhancing implementation and enforcement, including building UNEO's horizontal mobilization capacity and strengthening the observance mechanisms by giving UNEO a specific monitoring and reporting role; (ii) building the institutional capacity of developing countries, including co-ordinating capacity-building action and assistance in mobilising financing for environmental projects; and (iii) rationalizing the existing system of MEAs, including giving UNEO a driving role in the convention alignment process and making UNEO a driving force for the integration of environmental concerns in other UN and non-UN bodies.

The South Centre report *For a Strong and Democratic United Nations: A South Perspective on Reform*[28] was presented at the Forum on the Future of the United Nations, which was convened in March 1995 in Vienna under the chairmanship of the UN Secretary-General. The South Centre asserted that in a new era of democracy and pluralism, the UN must lead and be seen to lead in the practice of democracy in all of its organs and processes. To that end, it recommended that the Security Council be composed of fully accountable members, all appointed on the basis of a democratic formula established by the General Assembly.

The South Centre further called for reforms to ensure that the Security Council act transparently, with constant and close reporting to and in consultation with the General Assembly. It also called for reforms to ensure that all member states apply the principles of democratic revenue-raising and governance as regards their UN contributions. The South Centre was very concerned about the need to empower the UN to deal with macroeconomic issues and to exercise genuine multilateral responsibility for macroeconomic co-ordination under the existing but unused mandates enshrined within the UN Charter.

[28] The South Centre, *For a Strong and Democratic United Nations: A South Perspective on UN Reform*, (Imprimerie Ideale: Geneva, 1996) www.southcentre.org/publications/unreform/toc.htm.

To that end, the South Centre recommended that the key provision in the UN Charter should be activated to enable the UN to exert policy leadership in macroeconomic and social policy issues, bringing all specialized agencies, including the Bretton Woods institutions, under its policy direction. It also calls for a major and comprehensive process of reform of the Bretton Woods institutions and the establishment of an effective mechanism within the UN to develop a framework of international review and regulation of transnational corporations. The South Centre also called for ECOSOC to be authorized to perform economic security functions and to design mechanisms to facilitate well-focused policy dialogue. Moreover, the South Centre called for the rebuilding of the intellectual capacity of the UN and its key organs to undertake high-quality creative analytical and policy-oriented work in the economic and social development arenas.

Options for Strengthening Linkages Between IEG, SDG and Global Governance Institutions

The 1994 UN reform report by Sir Brian Urquhart and the late Erskine Childers expressed concern about the erosion of the intellectual leadership of the UN Secretary-General in the areas of macroeconomic and development issues.[29] They recommended the establishment of a new post of Deputy Secretary-General for International Co-operation and Sustainable Development to be responsible for all UN economic and social policy research, analysis, policy development and programming. The South Centre's position, outlined above, was very much aligned with the concerns raised by Urquhart and Childers regarding the need to empower the UN to deal with macroeconomic issues, and to exercise genuine multilateral responsibility for macroeconomic co-ordination under the existing but unused mandates enshrined within the UN Charter.

The 2004 World Commission on the Social Dimensions of Globalization[30] asserted that policy co-ordination and coherence is a critical challenge for the multilateral system. To that end, it called for greater leadership on harmonising and balancing social and economic policy to achieve larger goals. Among other suggestions, it recommended further consideration of the proposal for the establishment of an economic and social security council with similar status to the Security Council as well as further consideration for the creation of a global council at the highest political level to provide leadership on global governance issues.

[29] Erskine Childers and Brian Urquhart, *Renewing the United Nations System* (Dag Hammarsköld Foundation: Uppsala, 1994).

[30] World Commission on the Social Dimensions of Globalization, *A Fair Globalization*, s*upra* note 7.

In its 2003 report entitled *International Sustainable Development Governance*,[31] the United Nations University argued in favour of clustering MEAs as an important step towards ensuring greater linkages between the key environmental regimes. UNU maintained that the first step in clustering is the creation of structures for the co-ordination between MEAs, such as joint meetings of convention bodies and secretariats, joint implementation of common activities, a common communications network, etc. Such cohesive arrangements might then develop into a more formal structure of co-ordination. Clustering needs political incentives in order to promote a continuous process and a structure of co-ordination. Catalysts such as UNEP need thus to attain a clear political mandate and an established authority in relation to those who will be subject to and take part in clustering efforts.

Options for New Institutions

The Potdsam Institute has suggested that UNEP, CSD, GEF, the secretariats of the major environmental conventions, and possibly UNDP, should be fused into a new World Environment and Development Organization (WEDO).[32] As one of its aims, the WEDO would give urgent tasks of environmental and developmental policy more weight among national governments, international organizations and the private sector. WEDO would also enable the international community to substantially improve the institutional setting for negotiating new agreements and programmes for action, and for implementing existing ones.

Urquhart and Childers felt that in an age of expanding democracy within UN member states, it was important for the UN itself to become increasingly democratic.[33] They recommended the establishment of a World People's Assembly that would enable the citizens of member states to have their own representatives in a specific organ of the UN. It would not be intended to abridge or confuse the UN's intergovernmental processes but, instead, complement the work of the national government delegations in the existing intergovernmental machinery. Specifically, the functions of the proposed People's Assembly would include: expressing citizens' views on international problems; influencing the development of intergovernmental policy formulation; monitoring the management and financing of the UN; and enhancing the collective accountability of UN member states.

[31] United Nations University/Institute of Advanced Studies (UNU/IAS), *International Sustainable Development Governance. The Question of Reform: Key Issues and Proposals* (UNU, 2002), www.ias.unu.edu/binaries/ISDGFinalReport.pdf.

[32] The Potsdam Institute, *Institutional Reform of International Environmental Policy: Advancing the Debate on a World Environment Organization* (Potsdam Institute, 2000).

[33] Childers and Urquhart, R*enewing the United Nations, supra* note 29.

The Commission on Global Governance, also know as the Carlsson Commission, has proposed that an Economic Security Council be established to provide leadership and to promote consensus on international economic issues and sustainable development.[34] It would play a role in assessing the overall state of the world's economy and in securing coherence and consistency in the policy goals of the international economic institutions as well. The Commission has argued that the establishment of an Economic Council as a new principal organ of the UN would be a first step towards the realization of sustainable development. Its objectives would be to integrate the work of all the UN bodies engaged in economic issues, to promote the harmonization of the fiscal, monetary and trade policies of all member states and to encourage international co-operation on technology transfer, financial flows and the functioning of commodity markets. The Independent Working Group on the Future of the United Nations not only endorses the concept of an Economic Council but also recommends the establishment of a corollary Social Council that would integrate all UN activities relating to social development such as environmental protection, education and health care.

The Independent Working Group on the Future of the United Nations has recommended that in order to integrate the UN's work on economic and social policy, the proposed Economic and Social Councils would have to meet once a year at the highest political level in the form of a Global Alliance for Sustainable Development. The proposed Global Alliance would provide an authoritative forum to promote consensus on global issues and develop the parameters for common action. Unlike the existing UN Commission on Sustainable Development, the Global Alliance is envisaged as a body that brings together two principal organs empowered with the same degree of authority as the Security Council.

Recommendations for the transformation of the Trusteeship Council have been debated since 1989 and have been reaffirmed by the Commission on Global Governance, the Royal Institute for International Affairs and, more recently, the United Nations University (UNU). The various proposals call for the transformation of the Trusteeship Council into a forum through which member states would exercise their collective trusteeship for the integrity of the global environment and common areas such as the oceans, the atmosphere and outer space. At the same time, it would serve to link civil society and the United Nations in addressing these points of global concern.

In *International Sustainable Development Governance*,[35] the United Nations University suggested that the sustainable development focus of the General Assembly has to be strengthened, possibly through the creation of a new committee. UNU has also recommended the establishment of a special ministerial commission to consider the possible need for changes in the UN Charter and the constituent instruments of the UN special-

[34] Commission on Global Governance, *Our Global Neighbourhood* (Oxford University Press, 1995).

[35] UNU/IAS, *International Sustainable Development Governance*, *supra* note 31.

ized agencies, and to examine how the weaknesses of the fragmented UN system can best be corrected while preserving its advantages, so as to initiate major improvements in the capacity of the system to serve the global community in the 21st Century.

It is important that proponents of increased participation set realistic targets. One possible realistic model of participation may be that of the Organization of Economic Co-operation and Development, which has business and trade union advisory committees that interact with governmental committees and can make recommendations. Establishing a formal role for committees will be helpful in both the MEA context and in relation to some of the broader linked environmental processes.

A Standing Committee on the Environment and Development could be created, which as one of its tasks would incorporate in the Security Council issues of environment and development that could undermine international peace and security.[36] Moreover, an independent body could be established endowed with universally accepted ethical and intellectual authority and charged with identifying and assessing risks of global change.[37]

Options for Enhancing Democratic Principles

An important guiding principle in global sustainable development governance reform is the fair and equitable distribution of bargaining power to ensure that the influence and voice of the world's poor is heard and reflected in the decisions of international environmental governance processes. To this end, the imbalances in the structures of global governance must be remedied with new efforts to create a more inclusive system. These could include: development of dispute settlement mechanisms that guarantee access to legal aid for developing countries; appointment of an international ombudsman to respond to grievances and investigate injustices; and establishment of an equivalent to the OECD for developing countries to support them with policy research to formulate and defend their positions.

Global governance systems must take decisions on the basis of a rule-based system that is accompanied by a fair and impartial system of enforcement, to ensure that concerned parties adhere to the rules and regulations and that action will be taken against parties for violation of the rules and regulations. Legitimacy implies that governance structures and systems are lawful and credible, and that they conform to recognized principles or accepted rules or standards. The principle of legitimacy is equated to the rule of law. Legitimacy is thus grounded in the following principles: equitable representa-

[36] Felix Dodds, 'Reforming the International Institutions', *Earth Summit 2002: A New Deal* (2nd ed., Earthscan: 2001).

[37] World Resources Institute, *World Resources 2002-2004: Decisions for the Earth: Balance, Voice and Power* (World Resources Insitute: Washington, 2003), pubs.wri.org/pubs_pdf.cfm?PubID=3764.

tion and decision-making processes that do not discriminate against developing countries; effective mechanisms that enable contributions by non-state actors; transparent decision-making processes; access to information; and recourse to administrative and judicial remedies.

Institutional accountability is a key priority in the reform of international environmental governance systems. Considerable work is required to identify modes for independent regulation, monitoring and assessment, which will be crucial in enhancing the accountability and transparency of all international institutions. Decision-making must be made more transparent and independent evaluations of international policies can be a first step towards increased accountability.

Action by governments alone will not solve the problems underlying the global failure to implement sustainable development. In order to transcend political conflicts and vested interests, multi-stakeholder participation and partnerships must be established and developed in decision-making and implementation. Effective international environmental institutions must foster public participation in sustainable development policy and in regulatory and planning processes, including co-operation with local governments, indigenous groups, community-based organizations and other stakeholders. More effective and systematic mechanisms are needed to ensure enhanced civil society involvement generally, especially for those groups who are underrepresented in the formal structures. Key indicators to measure the quality and scope of participation include: relationship between the institution and the stakeholders in policy formulation; level of engagement of stakeholders; and gender sensitiveness in the participation process.

Effective international environmental institutions should ensure that citizens have access to information regarding laws, policies and activities as well as the status of environmental, social and economic conditions. Effective international environmental institutions should provide transparent, non-discriminatory and fair administrative and judicial arrangements for enforcement, rights of review, appeal and remedies.

Four main tracks are necessary to bridge the North/South knowledge divide: strengthen the data and scientific foundations of the South; strengthen the scientific community in the South; promote more research on the South among Northern scientists; and broaden the groups with the ability of generating scientific knowledge. Moreover, a more sustainable balance between corporate interests and interests represented by the inter-state system should be promoted. Some examples are the creation of corporate and civil society advisory bodies to the Conferences of the Parties of MEAs, establishing other joint standard-setting bodies, and agreements to joint investigation and enforcement arrangements. The principle of common but differentiated responsibility recognizes the basic responsibility of developed countries in causing environmental crises with their unsustainable patterns of consumption and production. At the same time, these countries and especially their big corporations have stripped the world's resources for their benefit and economic growth. In this way, an equitable framework is neces-

sary for the transition to sustainable development, with the developed world taking the larger share of adjustment.

Global environmental governance systems must ensure the provision of visionary leadership that inspires nation states to overcome their preoccupation with narrow national interests and to recognize that national security is indivisible from global security and requires sustained commitments to long-term ecological and human security. An effective global governance system must provide or enable a transformational leadership function, that is, leadership that is capable of bringing about fundamental change through action that is perceived as legitimate. This can involve key individuals, but it also relates to collective leadership through decision-making groups or organizations.

Adequate financial resources must be made available to all international environmental institutions that are working to further progress in sustainable development to ensure that they carry out their mandates. It is also essential to provide resources for developing and transitional countries to effectively prepare, participate and follow up processes.

Part II

International Environmental Law and Law-making

Individuals and Disasters: The Past and the Future of International Environmental Law[1]

Ed Couzens[2]

International Environmental Law

It is not easy to pinpoint when and where international environmental law began. While it is possible to look back at historical events – and occasionally curiosities – and label them examples of international environmental law, they would not at the time have been seen as such in the sense that we understand environmental law today. Examples of early multilateral environmental agreements, as we understand them today, can perhaps be seen in certain examples from the late 19th Century. In 1881, for example, an international convention was agreed concerning measures to be taken against *Phylloxera vastatrix*;[3] this was supplemented by an additional convention in 1889.[4] *Phylloxera vastatrix* is a species of root louse native to Mississippi in the United States. Devastating to non-resistant European vines and so small as to be almost impossible to detect, in the twenty years from 1865 the species devastated 70 percent of European vineyards. Feeding on vine roots and leaves, the louse quickly causes a vine to rot and die.[5] From these early beginnings, international environmental law today consists of detailed regimes covering a broad range of environmental issues. These regimes develop and emanate from treaties, general principles, judicial decisions and custom.

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1 This paper is based on a lecture given by the author on 23 August 2005.

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3 Convention on Measures to be Taken against the Phylloxera Vastatrix, Bern, 3 November 1881, *IPE* 1571.

4 Additional Convention on Measures to be Taken against the Phylloxera Vastatrix, Berne, 15 April 1889. See also International Plant Protection Convention (New Revised Text), 17 November 1997, in force 2 October 2005, www.fao.org/Legal/TREATIES/004t-e.htm.

5 For a description of *Phylloxera vastatrix*, see www.winepros.org/wine101/vincyc-phylloxera.htm.

A multilateral environmental agreement usually comes into existence by way of a treaty or convention. This does of course have its own inherent problems. The difficulty of achieving a firm commitment to change from large gatherings of states can be seen in one of the most important Principles in the Stockholm Declaration, in which acknowledgement is made of state sovereignty. Principle 21 states that

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure 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.[6]

Echoes of the *Behring Sea Fur Seals*,[7] the *Trail Smelter*[8] and the *Lac Lanoux*[9] arbitrations can be seen in this formulation. The principle, sovereignty, can be seen as an attempt to accommodate the interests of individual states – after the decolonization of many African states in the 1960s sovereignty was a concept guarded especially jealously by the newly independent states – while at the same time attempting to entrench as binding a commitment to environmental protection as possible.

With no international environmental court enjoying jurisdiction, faced with an environmental dispute, states sometimes agree to place the matter before arbitration. Although binding only on the states parties to, and in the context of, the respective disputes, certain of these arbitral decisions have come to be recognized as authoritative and influential. An important arbitration, the *Lac Lanoux Arbitration*, took place in 1957. France had within its own territory diverted a watercourse, thereby affecting Spain. The arbitral tribunal confirmed as a principle of international customary law that states are required to co-operate with each other in order to mitigate transboundary environmental risks.[10] The tribunal held that France had indeed complied with its obligations – in terms of treaty and customary law – to negotiate with Spain, in good faith, before diverting the watercourse. However, the tribunal noted that France's obligation extended to informing and consulting with Spain in regard to the proposed diversion, but that Spain did not have a right to prevent France from going ahead with the project.[11] Arguably, the *Lac Lanoux* principles have been extended to the management of other transboundary risks.

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6 Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972, 11 *International Legal Materials* (1972) 1416, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503.

7 See *infra*, footnote 69.

8 See *infra*, footnote 88.

9 *Affaire du Lac Lanoux*, XII *United Nations Reports of International Arbitral Awards* at 285-317, Lake Lanoux Arbitration (English Translation), 24 *International Law Reports* (1957) at 105-142.

10 Patricia Birnie and Alan E. Boyle, *International Law and the Environment* (2nd ed., Oxford University Press, 2002) at 126.

11 *Ibid.*

In other words, prior notification and consultation are called for when states perform acts of a hazardous or potentially harmful nature.[12]

Custom is of course an important source of international law. An important attempt at the codification of customary international law came in 1982 with the adoption of the United Nations Convention on the Law of the Sea (UNCLOS).[13] The Convention had taken nearly a decade of negotiation before adoption, and eventually entered into force in 1994. The Convention contains comprehensive provisions on the marine environment. A significant step is taken, for example, in Article 206 of the Convention, which reads:

> When States have reasonable grounds for believing that planned activities under their jurisdiction or control may cause substantial pollution of or significant and harmful changes to the marine environment, they shall, as far as practicable, assess the potential effects of such activities on the marine environment and shall communicate reports of the results of such assessments in the manner provided in article 205.[14]

It is important to note the precautionary element of the phrase: '*may* cause substantial pollution'. The article effectively requires that states undertake assessments before carrying out planned activities, even without substantive proof that the proposed activities *will* cause substantial damage. UNCLOS also created a Law of the Sea Tribunal, for resolving disputes under the Convention.

In many cases, international environmental law takes the form of statements of intent, declarations, guidelines or principles. In other words so-called soft law, which does not impose binding obligations on states. The hope of the international environmental lawyer or analyst must be that over time, as principles are repeated in more international conventions, this soft law will harden and environmental principles come to be seen as hard law. This paper will look at some of the ways individuals and environmental disasters have had an effect on the development of international environmental law through its various sources.

12 *Ibid.*, at 127.

13 United Nations Convention on the Law of the Sea, 10 December 1982, in force 16 November 1994, 21 *International Legal Materials* (1982) 1261, www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

14 Article 206, *ibid.*

The Role of Intergovernmental Organizations and Non-governmental Organizations

The period between the two World Wars was not marked by great concern for the environment, but it is important for the founding of a number of bodies which were later to become significant. In 1922, for example, the International Committee for Bird Protection was founded in England; it later became the International Council for Bird Preservation. Eventually in the 1990s the organization transformed into Birdlife International, a 'global conservation federation with a worldwide network of partner organizations.'[15] In 1929, the Dutch Government funded the establishment of an International Office for Documentation for the Protection of Nature (IOPN). This was subsequently restructured in 1948, under the wing of UNESCO, as the International Union for the Protection of Nature (IUPN). In 1956, the organization became the International Union for Conservation of Nature and Natural Resources: the IUCN. From 1990, the name World Conservation Union has been used, although the organization is still probably better known as the IUCN. The World Conservation Union is, according to its own website, the world's largest and most important conservation network. The Union comprises 82 States, 111 government agencies, more than 800 non-governmental organizations (NGOs) and some 10,000 scientists and experts from 181 countries in a worldwide partnership.[16] The Union's mission is 'to influence, encourage and assist societies throughout the world to conserve the integrity and diversity of nature and to ensure that any use of natural resources is equitable and ecologically sustainable.'[17] These two bodies, Birdlife International and the IUCN, show how individuals responding to perceived problems can create organizations which ultimately become extremely influential. The IUCN today is partly funded by the United Nations.

In 1945 the United Nations (UN) was established, followed by the Food and Agriculture Organization (FAO) and the United Nations Educational, Scientific and Cultural Organization (UNESCO). The significance of these organizations for the history of international environmental law can obviously not be overstated. It is from the UN that the vast majority of multilateral environmental agreements currently in force derive their authority, and under the banner of which the future of such agreements is likely to be decided. Despite certain problems of legitimacy, consensus and credibility, the UN remains the world's leading intergovernmental and norm-determining body.

An important non-governmental organization was created in 1961: the World Wildlife Fund (WWF), today called the Worldwide Fund for Nature. This organi-

15 See, for example, www.birdlife.org/ and www.americanbirding.org/abalinks/linkspage1a.htm.

16 See, for example, www.iucn.org/en/about/.

17 *Ibid.*

zation works closely with the IUCN and is involved in raising money and campaigning for the protection of wildlife in many countries.[18] In 1970, a small group of environmental activists formed a NGO called Greenpeace International. In 1971 they began a campaign of courageous but non-violent activism in protest against United States' nuclear testing north of Alaska. In 1973 this was expanded, under the leadership of the Canadian David McTaggart, to protest against French nuclear testing in the South Pacific. Greenpeace is today the most visible and well-known of environmental protest groups and provides an important example of how the actions of individuals co-ordinating themselves into a group can influence environmental change.[19]

Pressure from ornithological groups culminated in 1971 with the Convention on Wetlands of International Importance especially as Waterfowl Habitat.[20] Non-governmental groups were prominent in the process; The Netherlands and the USSR backed the Convention strongly, as did groups such as the ICBP and the IWRB, now called Wetlands International. The Ramsar Convention was one of a cluster of international conventions, agreements and declarations on the environment which saw the light of day in the early 1970s. One of the most central was the Stockholm Declaration agreed at the 1972 United Nations Conference on the Human Environment (UNCHE).[21] The Conference itself was, at the time, the largest gathering of states. The Declaration consisted of key environmental principles; the idea that 'man bears a solemn responsibility to protect and improve the environment for present and future generations' can be found in Principle 1. The Conference was chaired by Maurice Strong, who has played an active role in international environmental treaties over three decades. The early 1970s also saw the Convention concerning the Protection of the World Cultural and Natural Heritage, which was driven by UNESCO.[22] At the time of writing, 812 sites (628 cultural, 160 natural and 24 mixed sites in 137 states parties) have been inscribed on the World Heritage List.[23] Unlike the Ramsar Convention, which encourages states parties to designate their own sites, the World Heritage Convention has a World Heritage Committee, which approves nominated sites.

18 See www.worldwildlife.org/.

19 See www.greenpeace.org/international/.

20 Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 January 1971, in force 21 December 1975 , 996 *United Nations Treaty Series* 245, www.ramsar.org/key_conv_e.htm (Ramsar Convention).

21 Stockholm Declaration, *supra* note 6.

22 Convention for the Protection of the World Cultural and Natural Heritage, Paris, 16 November 1972, in force 17 December 1975, 11 *International Legal Materials* (1972) 1358, whc.unesco.org/en/175/.

23 See whc.unesco.org/en/list/.

Sovereignty and Environmental Thought

A significant treaty was signed in 1959: the Antarctic Treaty. A number of states had made claims to the area based on discovery, contiguity or significance. The treaty froze all these claims, however, and designated Antarctica as a natural reserve and prohibited any mineral resource activity.[24] Although dated – it would be extremely unusual to find a more modern treaty requiring unanimity of states parties – the Antarctic Treaty shows how states can, if they so desire, form an agreement which benefits the environment and states generally, rather than the individual state itself. In 1968 an extremely influential article, 'The Tragedy of the Commons', was published by Garrett Hardin in the journal *Science*.[25] Hardin postulated a commons on which tribesmen grazed livestock at no cost to themselves. For each tribesman there would always be an incentive to add animals as they could also graze on the common area. If only one tribesman did this, carrying capacity would not be exceeded. If all did, however, then the commons would collapse as a resource which was able to support all. As a metaphor for unsustainable use of the environment, the article has resonated in much future thinking.

The 1972 Stockholm Conference (UNCHE) saw agreement on the founding of the United Nations Environment Programme (UNEP), the only United Nations programme based in a developing country and the only dedicated environmental programme.[26] Non-governmental organizations played an unprecedented role in the founding of UNEP in December 1972.[27] Also in 1972, Christopher Stone published an article entitled 'Should trees have standing?'. In one of the seminal articles in environmental legal thinking,[28] Stone argued that the history and process of law has been the gradual extension of legal rights to entities to whom it was at one time unthinkable that such rights should be granted. These include slaves, children or women, for example. Might it not be, he argued, that at some future time people will look back on today and claim that it was unthinkable that the environment – forests and trees even – should *not* have been given legal rights?

24 Antarctic Treaty, Washington D.C., 1 December 1959, in force 23 June 1961, 402 *United Nations Treaty Series* 71, www.ats.aq/uploaded/SIGNEDINWASHINGTON.pdf. Article 7 of the Protocol on Environmental Protection to the Antarctic Treaty, Madrid, 4 October 1991, in force 14 January 1998, 30 *International Legal Materials* (1991) 1461, www.ats.aq/protocol.php, provides that '[a]ny activity relating to mineral resources, other than scientific research, shall be prohibited' and Article 25 provides that the operation of the Protocol cannot be reviewed until 50 years after date of entry into force.

25 Garret Hardin, 'The Tragedy of the Commons', 162 *Science* (1968) 1243-1248, www.sciencemag.org/cgi/content/full/162/3859/1243.

26 For a more detailed account of the birth of UNEP see the paper by Donald Kaniaru in the present Review.

27 See, for example, United Nations Environment Programme, 'UNEP Policy on NGOs and Other Major Groups', www.unep.ch/natcom/assets/about_natcom/about_ngos.doc.

28 C.D. Stone, 'Should Trees Have Standing? Towards Legal Rights for Natural Objects', in C.D. Stone, *Should Trees Have Standing: And Other Essays on Law, Morals and the Environment* (25th Anniversary Ed., Oceana Publications: New York, 1996).

The 1987 release of *Our Common Future*,[29] the Report of the World Commission on Environment and Development, is significant for introducing formally into international environmental discourse the phrase 'sustainable development'. The Report, adopted by the General Assembly in 1987, provided a significant stepping stone for future Conventions and laid the foundation for the convening of the 1992 United Nations Conference on Environment and Development. The Report suggested that:

> sustainable development, which implies meeting the needs of the present without compromising the ability of future generations to meet their own needs, should become a central guiding principle of the United Nations, Governments and private institutions, organizations and enterprises.[30]

In 1992, the United Nations Conference on Environment and Development (UNCED), or Rio Summit, was held. This was, at the time, the largest ever gathering of world leaders and non-governmental organizations and led to the adoption of several important declarations and agreements and the creation of several important entities. The Rio Declaration on Environment and Development was adopted.[31] The Commission on Sustainable Development (CSD) was established by UNCED and the global action plan, *Agenda 21*,[32] was adopted. Despite setbacks, such as the reluctance of the United States and certain other developed states to commit to binding agreements, the Conference sought not merely to issue non-binding principles, but to provide world states with a convincing blueprint for sustainable development, in order that real progress might be made.

In 1993, a seven member Chamber of the International Court of Justice (ICJ) with a remit to deal with environmental issues was established. While the Chamber has not so far been particularly active, the potential now exists for environmental disputes to be adjudicated upon by this special body. Although the special chamber was not seized in the *Gabcikovo-Nagymaros Case (Hungary/Slovakia)* but was heard by the 15 judges presiding in plenum, the case is certainly the most important environmental case so far to have come before the ICJ.[33] The court found that Hungary had been wrong to withdraw from a joint project but that Slovakia had been

29 World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press, 1987), UN Doc. A/42/47 (1987)(The Brundtland Report).

30 Preamble, *ibid.*

31 Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), www.un.org/documents/ga/conf151/aconf15126-1annex1.htm. Although so called soft law and therefore not imposing firm obligations on states, the Declaration is significant as an indication of the direction in which customary international law is moving.

32 *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

33 *Gabcikovo-Nagymaros Project (Hungary/Slovakia)*, ICJ Reports (1997) 7, Separate opinion of Vice-President Weeramantry, at 88, www.icj-cij.org/icjwww/idocket/ihs/ihsjudgement/ihs_ijudgment_970925_frame.htm.

wrong in proceeding in any case to complete the project against Hungary's wishes. The ICJ found, in fact, that each state had an obligation to compensate the other. From the environmental point of view, the case is important as the ICJ held that:

> in the field of environmental protection, vigilance and prevention are required on account of the often irreversible character of damage to the environment and of the limitations inherent in the very mechanism of reparation of this type of damage.
>
> Throughout the ages, mankind has, for economic and other reasons, constantly interfered with nature. In the past, this was often done without consideration of the effects upon the environment. Owing to new scientific insights and to a growing awareness of the risks for mankind – for present and future generations – of pursuit of such interventions at an unconsidered and unabated pace, new norms and standards have been developed, set forth in a great number of instruments during the last two decades. Such new norms have to be taken into consideration, and such new standards given proper weight, not only when States contemplate new activities but also when continuing with activities begun in the past. This need to reconcile economic development with protection of the environment is aptly expressed in the concept of sustainable development.
>
> For the purposes of the present case, this means that the Parties together should look afresh at the effects on the environment.[34]

The ICJ then held that it was not its role to dictate the result of such consideration of the effects on the environment.

A nettle which needs to be grasped if the goals of sustainable development are to be successful, is that of human population growth. At the 1994 United Nations International Conference on Population and Development the States present agreed in the Programme of Action[35] that

> [s]ustainable development as a means to ensure human well-being, equitably shared by all people today and in the future, requires that the interrelationships between population, resources, the environment and development should be fully recognized, properly managed and brought into a harmonious, dynamic balance. To achieve sustainable development and a higher quality of life for all people, States should reduce and eliminate unsustainable patterns of production and consumption and promote appropriate policies, including population-related policies, in order to meet the needs of current generations without compromising the ability of future generations to meet their own needs.[36]

The early years of the 21st Century saw a potentially important environmental development, which mirrored the increasing linkage of environment and development. The rise of an anti-globalization protest movement in the area of interna-

34 Para. 140, *ibid.*

35 Programme of Action of the United Nations International Conference on Population and Development, Cairo, 13 September 1994, www.iisd.ca/Cairo/program/p00000.html.

36 Principle 6, *ibid.*

tional trade also incorporated environmental protests. In the so called Battle for Seattle, the best-known protest saw the 1999 World Trade Organization meeting in Seattle unable to continue after disruptions.[37] Similar protests were then seen at the 2000 Amsterdam Conference on Global Warming, the 2001 World Economic Forum held in Davos,[38] the 2000 and 2002 International Monetary Fund (IMF) meetings in Washington D.C.,[39] the 2001 Free Trade Area of the Americas Agreement (FTAA) meeting in Quebec,[40] the 2001 European Union Leaders' Summit in Gothenburg, and the 2001 G-8 Summit in Genoa, where a protester was killed by police.[41]

Ten years after the Rio Summit there were great hopes for the 2002 World Summit on Sustainable Development (WSSD), held in Johannesburg, South Africa, as a major summit at which practical solutions could be found for the world's environmental and developmental problems. It is far too early to judge the summit's place in history, but it certainly did not achieve the immediate results that if might have. According to the Summit website:

> [b]y any account, the Johannesburg Summit has laid the groundwork and paved the way for action. Yet among all the targets, timetables and commitments that were agreed upon at Johannesburg, there were no silver bullet solutions to aid the fight against poverty and a continually deteriorating natural environment. In fact, there was no magic and no miracle – only the realization that practical and sustained steps were needed to address many of the world's most pressing problems.
>
> As an implementation-focused Summit, Johannesburg did not produce a particularly dramatic outcome – there were no agreements that will lead to new treaties and many of the agreed targets were derived from a panoply of assorted lower profile meetings. But some important new targets were established, such as: to halve the proportion of people without access to basic sanitation by 2015; to use and produce chemicals by 2020 in ways that do not lead to significant adverse effects on human health and the environment; to maintain or restore depleted fish stocks to levels that can produce the maximum sustainable yield on an urgent basis and where possible by 2015; and to achieve by 2010 a significant reduction in the current rate of loss of biological diversity.[42]

37 See, for example, Anup Shah, 'Protests in Seattle', www.globalissues.org/TradeRelated/Seattle.asp, 18 February 2001.

38 See, for example, Anup Shah, 'Public Protests Around the World', www.globalissues.org/TradeRelated/FreeTrade/Protests.asp, 25 November 2003.

39 See, for example, Bob Franken, Shirley Hung and Mike Ahlers, 'Hundreds Arrested at IMF Protests', archives.cnn.com/2002/US/South/09/27/imf.protests/, 27 September 2002.

40 See, for example, Nick Busse, 'Minnesota Unions, Activists Protest Quebec Summit's Free Trade Pact', www.mndaily.com/daily/2001/04/23/news/new2/, 23 April 2001; and Anup Shah, 'The Mainstream Media and Free Trade', www.globalissues.org/TradeRelated/FreeTrade/Media.asp, 14 July 2002.

41 See, for example, World Development Movement, 'WMD Report on the G8 Summit in Genoa, July 2001', www.wdm.org.uk/campaigns/Genoa.htm.

42 See Johannesburg Summit, 'The Johannesburg Summit Test: What will Change?', www.johannesburgsummit.org/html/whats_new/feature_story41.html.

International Environmental Law and Forestry

Lyster suggests that '[f]orestry conservation laws in Babylon date back to 1900 B.C.' and that 'Akhenaten, King of Egypt, set aside land as a nature reserve in 1370 B.C.'[43] The Norman conquest of England in 1066 could, for example, also be seen in this light. Before 1066, and certainly from the time of the Franks and their kindred tribes in the 7th Century, hunting in continental Europe was regarded as being the exclusive right of the king and his nobles; the Franks were the first to introduce the *foresta* system, which reserved areas and animals for the exclusive use of certain classes.[44] While William the Conqueror basically accepted and enforced existing English laws, the forest laws were different; the system imposed on the Saxon English was like none they had seen before.[45] Vast areas of land were designated as royal forests (*foresta regis*);[46] to protect these arbitrarily imposed rights William imposed the death penalty for the killing of a royal deer, and all deer were by definition considered royal.[47] This attempt to extend laws across boundaries can arguably be seen as an early attempt to create international law in the forest context. Little attention was given to forestry in international law over the next millennium, however; and it is only in the second half of the 20th Century that we begin to find attention turned once again to forestry.[48]

In 1983 the International Tropical Timber Agreement was concluded.[49] The intention behind this agreement was '[t]o provide an effective framework for co-operation and consultation between tropical timber producing and consuming members with regard to all relevant aspects of the tropical timber economy.'[50] The Agreement was significant for its recognition of the different responsibilities held by the timber producing (largely developing) and consuming (largely developed) states, and for its recognition of the need to:

43 S. Lyster, *International Wildlife Law* (Grotius Publications: Cambridge, 1985) at xxi.

44 C.C. Trench, *The Poacher and the Squire: A history of poaching and game preservation in England* (Longmans: London, 1967) at 16.

45 Prior to this wild animals had been ownerless property which could be hunted by anyone, subject only to the laws of trespass.

46 See, for example, C.R. Young, *The Royal Forests of Medieval England* (University of Pennsylvania Press: Philadelphia, 1979) 5.

47 A. Ingram, *Trapping and Poaching*, Shire Album 34 (Shire Publications: Princes Risbourough, 1978) at 5.

48 The *Trail Smelter Arbitration*, for example, concerned damage to forests. See below.

49 International Tropical Timber Agreement, Geneva, 18 November 1983, in force 1 April 1985, sedac.ciesin.org/entri/texts/tropical.timber.1983.html. ITTA 1983 was succeeded by the ITTA 1994, International Tropical Timber Agreement, Geneva, 26 January 1994, in force 1 January 1997, www.itto.or.jp/live/PageDisplayHandler?pageId=201.

50 Article 1(a), ITTA 1983, *ibid.*

> encourage the development of national policies aimed at sustainable utilization and conservation of tropical forests and their genetic resources, and at maintaining the ecological balance in the regions concerned.[51]

This latter recognition of the need for sustainability is significant in the face of the obvious utilitarian thrust of the Agreement, which is visible in goals such as:

> Encourag[ing] increased and further processing of tropical timber in producing member countries with a view to promoting their industrialization and thereby increasing their export earnings.[52]

In 1988, the murder of Chico Mendes in the Amazon rain forest in Brazil highlighted the plight of the world's old growth forests, which are being rapidly logged and cleared with consequent loss of biodiversity and carbon sink capacity. Mendes was a rubber tapper and community activist who was murdered by ranchers, against whose encroachment into the Amazon he was leading a campaign. As a result of the international pressure which followed his murder, the Brazilian government created a number of comparatively large extraction reserves to be restricted from ranching activity.[53]

In 1992 at UNCED in Rio the Forest Principles[54] were adopted. The Forest Principles state in the Preamble that the

> guiding objective […] is to contribute to the management, conservation and sustainable development of forests and to provide for their multiple and complementary functions and uses.[55]

The Principles seek to provide a framework in which both conservation and use of forests can be compatible. It has been suggested that:

> Reflecting the wording found in both the Stockholm and Rio Declarations, the Forest Declaration's first principle asserts the State's 'sovereign right to exploit their own resources pursuant to their own environmental policies and [that States'] have the responsibility [sic.] to ensure 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.' While the well established sovereignty right of State to use its resources is clear from such first principle, at least two other international envi-

51 Article 1(h), ITTA 1983, *ibid.*

52 Article 1(e), ITTA 1983, *ibid.*

53 See, for example, 'Extractive Resources', in Nigel J.H. Smith et al., *Amazonia: Resiliency and Dynamism of the Land and its People* (United Nations University: Tokyo, 1995), http://www.unu.edu/unupress/unupbooks/80906e/80906E00.htm#Contents.

54 Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. III), www.un.org/documents/ga/conf151/aconf15126-3annex3.htm.

55 Preamble, *ibid.*

> ronmental law principles seem to surface from such first principle: (a) that States should not use its territory to cause harm to other States; and (b) the duty to prevent harm.[56]

Although firmly expressed to be non-binding, as a statement of intent – and as recognition of the importance to the world of forests – the Principles are of significance.

A significant case in a national jurisdiction but with potential implications for the development of international environmental law, was reported in 1993. In *Oposa et al. v. Fulgencio S. Factoran, Jr. et al.*,[57] the Philippines Supreme Court was called on to decide on the legality of the Filipino government's decision to issue licences to log timber in land areas greater than were available, potentially leading to the complete destruction of Filipino forests within a decade. The case was brought on behalf of Filipino minors, on the basis of their right to a sound environment for generations to come. The case, said the Court

> has a special and novel element. Petitioners minors assert that they represent their generation as well as generations yet unborn. We find no difficulty in ruling that they can, for themselves, for others of their generation and for the succeeding generations, file a class suit. Their personality to sue in behalf of the succeeding generations can only be based on the concept of intergenerational responsibility insofar as the right to a balanced and healthful ecology is concerned. Such a right, as hereinafter expounded, considers the 'rhythm and harmony of nature'.[58]

The Court ruled that the minors had *locus standi in judicio*, on the ground that

> [n]eedless to say, every generation has a responsibility to the next to preserve that rhythm and harmony for the full enjoyment of a balanced and healthful ecology. Put a little differently, the minors' assertion of their right to a sound environment constitutes, at the same time, the performance of their obligation to ensure the protection of that right for the generations to come.[59]

On the merits, the Court then found in favour of the minors' petition.

In October 2004 the Nobel Peace Prize was awarded to Professor Wangari Maathai, in recognition of 'her contribution to sustainable development, democracy and peace'. A Kenyan, she had founded the Green Belt Movement which planted more

56 See The World Bank Group, 'International Environmental Law and the Protection of Forests: Rio's Forest Principles Declaration', www4.worldbank.org/legal/legen/legen_forests.html.

57 *Juan Antonio Oposa et al. v. The Honorable Fulgencio S. Factoran, Jr., in his capacity as the Secretary of the Department of Environment and Natural Resources, and the Honorable Eriberto U. Rosario, Presiding Judge of the RTC, Makati, Branch 66, respondents* [G.R. No. 101083. July 30, 1993]. See, for example, www.elaw.org/resources/text.asp?ID=278.

58 *Ibid.*

59 *Ibid.*

than 30 million trees across Africa. She has done much to raise awareness of the importance and the vulnerability of indigenous forests and of the need for the increased planting of trees to sustain people and their livelihoods and to preserve both natural environments and ways of life. The award signals global recognition of this.[60]

In an echo of the murder of Chico Mendes in the Amazon in 1988, in February 2005 a Catholic nun named Dorothy Stang was assassinated in the Amazon. She had worked for years to protect the Amazon rainforests from being opened up to ranching interests.[61] In an ironic parallel to the Mendes case, Brazil's government almost immediately declared that it would take steps to protect some four million hectares of rainforest, by declaring it a conservation area.[62]

Overfishing and Whaling

As early as 1882 it was recognized that the world could have a problem in respect of overfishing. In that year, the United Kingdom, Germany, France, Denmark and Belgium signed the North Sea Fisheries Convention and agreed to mutual rights of visit, search, and arrest of the treaty powers' public vessels.[63] This agreement is staggering when looking at the lack of protection given to the oceans in 2005; after 124 years little has been done to offer substantive protection to marine species.

Before the Second World War, concern about overfishing could be seen in the 1937 International Convention for the Regulation of Meshes of Fishing Nets and the Size Limits of Fish.[64] Although the United States and Canada did not become parties and the Convention never entered into force fisheries did, however, receive a temporary reprieve. During the six years of the Second World War there was very little fishing activity worldwide, and fish stocks recovered somewhat. After the Second World War, although a new fishing treaty was negotiated and entered into

60 See, for example, Katy Salmon, 'Profile: Nobel Peace Prize Winner Wangari Maathai', 21 October 2004, www.peopleandplanet.net/doc.php?id=39.

61 See, for example, Democracy Now, 'Murder in the Amazon: A U.S.-Born Nun and Environmentalist is Gunned Down in Brazil For Opposing Rainforest Logging , 22 February 2005, www.democracynow.org/article.pl?sid=05/02/22/1527243 and Greenpeace International, 'Nun Assassinated Defending Amazon, 13 February 2005, www.greenpeace.org/international/news/nun-assassinated-defending-ama.

62 See, for example, British Broadcasting Corporation, 'Murder Prompts Brazil Amazon Curb', 18 February 2005, news.bbc.co.uk/2/hi/americas/4275781.stm.

63 See, for example, AllRefer.com, 'Fisheries, Environmental Studies', reference.allrefer.com/encyclopedia/F/fisherie-history-of-fisheries-regulation.html.

64 International Convention for the Regulation of the Meshes of Fishing Nets and the Size Limits of Fish, London, 23 March 1937, not in force. See, for example, http://www.nafo.ca/about/history/early.html.

force,[65] fishing intensified dramatically worldwide. One can only conjecture as to why, if there was international concern in 1882 and again in 1937 and 1946 in relation to fish stocks, there is not now, in 2005, widespread panic.

In 1946 the International Convention for the Regulation of Whaling was signed.[66] The Convention provides an interesting example of how a multilateral environmental agreement can change shape and form over time. In time the convention has become an instrument with an opposite objective to what it began with. The ICRW began as a utilization treaty with twelve states party, all of whom were active whaling nations. The premise was that they would annually decide on quotas, in order to manage whales as a resource, with an annual meeting of an International Whaling Commission (IWC). The quota system was inefficient, however, and whale numbers continued to drop markedly. By 1975 and the years immediately afterward, a number of countries had announced that they would cease whaling, showing how consumer perceptions toward use of natural resources had changed in large parts of the world. In 1982, the International Whaling Commission (IWC) adopted a moratorium on commercial whaling, to take effect from 1986.[67] This represented a sea change from the utilitarian focus of the initial parties to the ICRW in 1946. In the interim years, a number of the states parties (Australia, South Africa, the United Kingdom, and the United States, for instance) had changed their attitudes to whaling and, there being no stipulations as to membership other than statehood, new parties (Austria and Switzerland, for instance) without histories of whaling had joined. Those states parties which wished to continue commercial whaling (Iceland, Japan and Norway, for instance) found themselves outvoted.

Fishing remains an area in which there has been little movement in international law. The Law of the Sea Convention (UNCLOS) of 1982 settled states' exclusive economic zones at 200 nautical miles. This provides an important protective measure, as the majority of marine living resources are to be found within coastal waters rather than on the high seas. The high seas remain, however, an open-access commons. In its *Plan of Implementation*, the World Summit on Sustainable Development committed, inter alia, to the following:

65 Convention for the Regulation of the Meshes of Fishing Nets and the Size Limit of Fish, London, 5 April 1946, in force 5 April 1953, www.oceanlaw.net/texts/mesh.htm.

66 International Convention for the Regulation of Whaling, Washington D.C., 2 December 1946, in force 10 November 1948, 161 *United Nations Treaty Series* 72.

67 See www.iwcoffice.org/index.htm.

> To achieve sustainable fisheries, the following actions are required at all levels:
>
> (a) Maintain or restore stocks to levels that can produce the maximum sustainable yield with the aim of achieving these goals for depleted stocks on an urgent basis and where possible not later than 2015.[68]

Biodiversity

In the context of biodiversity, an important early arbitral ruling was the *Behring Sea Fur Seals Arbitration*.[69] Due to overhunting, the stocks of Bering Sea fur seals were being rapidly depleted. As the seals had their birthing grounds on United States territory, coupled with the seals' *animus revertendi*, the US government essentially argued that the seals were US property, giving the US the right to protect them. Consequently, the US arrested a number of British (Canadian) vessels on the high seas. The US also argued that it was the trustee of the seals for the benefit of mankind generally. Britain (Canada) argued that it had the right to hunt seals on the high seas as they were property either *res communis* or *res nullius*. The arbitral tribunal found against the US arguments and freedom of the high seas was held to be the prevailing doctrine.[70] Birnie and Boyle comment that:

> The importance of this decision to the development of the law concerning conservation of marine living resources cannot be overstressed. It laid the twin foundations for subsequent developments over the next century. First, 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; secondly, it recognized the need for conservation to prevent over-exploitation and decline of a hunted species, but because of the former finding, it made this dependant on the express acceptance of regulation by participants in the fishery.[71]

By way of recommendation, the tribunal also outlined a nine-point plan for conservation, which included

> a prohibited zone; a closed season in a defined area of the high seas, with specific exemptions in favour of indigenous peoples hunting for traditional purposes, using traditional methods; a limitation on the type of vessels used; a licensing system to be operated by the governments concerned; use of a special flag while sealing; the keeping of catch records; exchange of data collected; governmental responsibility for selection of suitable crews; the provisions were to continue for five years or until

68 World Summit on Sustainable Development, *Johannesburg Plan of Implementation*, para. 31, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm. See also paras. 30-34 in respect of fishing and marine ecosystem management.

69 *Behring Sea Fur Seals Arbitration, (Great Britain v. USA)*, *Moore's International Arbitration Awards* (1898) 755.

70 P. Birnie and A. Boyle, *International Law and the Environment*, *supra* note 10, at 649.

71 *Ibid*., at 649-50.

> abandoned by agreement. Moreover, the tribunal went on to recommend that these regulations be enacted into apposite and uniform national laws in *both* states and that national measures be adopted to ensure their enforcement. Thus, the priority of national measures of enforcement, rather than international means, also was established. Finally, a three-year ban on all sealing was recommended, laying the foundation of the moratorium approach to conservation of marine mammals.[72]

Although contractually binding on the participants, the ruling was not binding on other users of the fur seals, such as Russia and Japan, and in practice it made little difference to the overexploitation of the resource. Birnie and Boyle suggest that:

> although it perpetuated the high seas freedom of fishing and hence made conservation more difficult, especially in relation to enforcement, the *Behring Sea* arbitral tribunal strongly supported the need for restraint in exploitation, clearly indicated the requisite measures, and recognized that freedom was not absolute but had to be regulated to take reasonable account of the interests of other states.[73]

Elsewhere, of great importance to the conservation of wild animals and birds were two conventions agreed around the turn of the 20th Century: the 1900 Convention for the Preservation of Wild Animals, Birds and Fish in Africa;[74] and the 1902 Convention for the Protection of Birds Useful to Agriculture.[75] Driven by Germany, the London Convention suggested that all colonial powers in Africa should introduce game regulations. Although most parties never ratified the Convention, as Mackenzie puts it, the Germans and British did so 'enthusiastically'.[76] Many of the provisions suggested in the London Convention echoed the *Behring Sea Fur Seals Arbitration*. A closed season was introduced, the hunting of male animals was only permitted during certain periods and restrictions were placed on weapons which were allowed to be used for hunting. Of relevance for the history of international environmental law is the separation of animals into species worthy of protection and those not so worthy or even those considered noxious and which should be actively exterminated. The latter group contained many species which today are seen as being most worthy of protection: the predators, such as lions and, amongst birds, the raptors and vultures.

Another Convention in the early-1970s cluster was the 1973 Convention on International Trade in Endangered Species (CITES).[77] Although arguably promoting

72 *Ibid*., at 650.

73 *Ibid.*

74 Convention for the Preservation of Animals, Birds and Fish in Africa, London, 19 May 1900, 188 *Consolidated Treaty Series* 418.

75 Convention for the Protection of Birds Useful to Agricuilture, Paris, 19 March 1902, 191 *Consolidated Treaty Series* 91.

76 J. M. Mackenzie, *The Empire of Nature* (Manchester University Press, 1988) 205.

77 Convention on International Trade in Endangered Species of Wild Flora and Fauna, Washington D.C., 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, www.cites.org/eng/disc/text.shtml.

trade in wild animal species by attempting to regulate such trade, the Convention probably provides the most visible and significant international protection for wild animal species today. Again, protection of state sovereignty is emphasized in the Convention; the CITES Secretariat has no jurisdiction within national boundaries. Furthermore, CITES echoed the 1900 London Convention by categorizing wild animal species; CITES affords different degrees of protection from trade to species depending on their listing in the three appendices of the Convention.

The Convention on the Conservation of Migratory Species of Wild Animals[78] and the Convention on the Conservation of European Wildlife and Natural Habitats[79] both signed in 1979 showed a new approach to the conservation of species. There is recognition in both conventions that habitat conservation is as important as the conservation of individual species. This recognition can perhaps already be seen in the 1971 Ramsar Convention, but arguably not in the 1973 CITES Convention. The 1980 Convention for the Conservation of Antarctic Marine Living Resources (CCAMLR)[80] further emphasized an ecosystem approach. According to Article I of the Convention

> 2. Antarctic marine living resources means the populations of fin fish, molluscs, crustaceans and all other species of living organisms, including birds, found south of the Antarctic convergence.[81]
> 3. The Antarctic marine ecosystem means the complex of relationships of Antarctic marine living resources with each other and with their physical environment.[82]

In 1980 the World Conservation Strategy was launched by UNEP, the World Conservation Union and WWF. This influential document was arguably the first to recognize that long-term efforts were required to solve environmental problems, and that this could not be done unless environment and development objectives were integrated.[83] The World Conservation Strategy was followed in 1982 by the adoption of the United Nations World Charter for Nature.[84] This Resolution of the Unit-

78 Convention on the Conservation of Migratory Species of Wild Animals, 23 June 1979, in force 1 November 1983, 19 International Legal Materials (1980), www.cms.int/documents/convtxt/cms_convtxt.htm.

79 Convention of the Conservation of European Wildlife and Natural Habitats, Bern, 19 September 1979, in force 1 June 1982, *Council of Europe Treaty Series* 104, conventions.coe.int/Treaty/en/Treaties/Html/104.htm.

80 Convention on the Conservation of Antarctic Marine Living Resources, Canberra, 20 May 1980, in force 7 April 1982, 19 *International Legal Materials* (1980) 841, www.ccamlr.org/pu/e/e_pubs/bd/toc.htm.

81 Article I.2, *ibid.*

82 Article I.3, *ibid.*

83 See, for example, 'The World Conservation Strategy', in UNEP, *Global Environmental Outlook 3: Past Present and Future Perspectives* (Earthscan Publications: London, 2002), www.unep.org/geo/geo3/english/049.htm.

84 World Charter for Nature, GA Res. 37/7, 28 October 1982, www.un.org/documents/ga/res/37/a37r007.htm.

ed Nations General Assembly set out general principles, including that '[n]ature shall be respected and its essential processes shall not be impaired.'[85] While being aspirational soft law in nature, rather than binding hard law, the Charter did require that '[t]he principles set forth in the present Charter shall be reflected in the law and practice of each State, as well as at the international level.'[86]

In 1989, against much opposition from range states in Southern Africa, the African elephant was placed on Appendix I of the CITES Convention giving the species virtually complete protection from international trade. In a sense an intrusion on national sovereignty, the ban on trade in ivory, coupled with consumer pressure in Western countries proved so effective that controlled trade in ivory has in recent years been allowed again. Although the listing decision was not popular with range states, it has by and large been obeyed and shows that states can act in ways detrimental to their own interests when called on to do so by the international environmental community. This is something of a departure from the experience of the 1982 moratorium on commercial whaling. Norway objected to the moratorium and continues to whale; Japan agreed to the moratorium, but continues to take whales annually under the guise of scientific research; and Iceland and Canada left the International Whaling Commission in order not to be dictated to. The Convention on Biological Diversity,[87] adopted at UNCED in 1992, goes beyond the international and species-based approach of CITES and provides for states parties to commit to the preservation of habitats and ecosystems within their own boundaries. This holistic and ecosystem-based approach surely reflects new understanding of the way in which biodiversity functions and the ways in which it must be protected.

Pollution

Pollution of the atmosphere

The years 1935-1941 saw the deliberations of an important arbitral tribunal. The *Trail Smelter Arbitration*[88] concluded that:

> no state has the right to use or permit the use of its territory in such a manner as to cause injury by fumes in or to the territory of another or the properties or persons therein, when the case is of serious consequence and the injury is established by clear and convincing evidence.[89]

85 Principle 1, *ibid.*

86 Principle 14, *ibid.*

87 Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, www.biodiv.org/doc/legal/cbd-en.pdf.

88 *Trail Smelter Arbitration (USA v Canada)*, 35 *American Journal of International Law* (1941) 684.

89 P. Birnie and A. Boyle, *International Law and the Environment*, *supra* note 10, at 111.

The case concerned pollution damage caused to forests and crops in the United States by pollutants from a smelter in the town of Trail, Canada. Trail had a lead and zinc smelting factory complex with 400-foot high chimneys. As astounding as it might seem today, the question in dispute was whether Canada was liable for the damage caused by the smelter, and whether it had any duty to prevent further damage from occurring. The tribunal decided that Canada did indeed have to take responsibility for past and future damage;[90] the reason that the question would surprise us so much today is in part due to the effect of the arbitral tribunal's decision on subsequent legal discourse. The tribunal, however, took a narrow view to damages, compensating for injury to persons and property, but appeared to exclude wider environmental interests such as wildlife, aesthetic considerations or the unity and diversity of ecosystems.[91] Although Canada was held to have no right to cause damage within the United States, its right to continue to operate the smelter was affirmed.[92] Birnie and Boyle comment that:

> [d]espite criticism of the tribunal for the limited range of national and international sources on which it relied in determining rules of international law, there is no reason to doubt that states remain responsible in international law for harm caused in breach of obligation by transboundary air pollution.[93]

In 1982, a hole was discovered in the ozone layer above Antarctica. British scientist Joseph Farman released results in 1985, which showed that the ozone layer had been depleting since at least 1970; this was due largely to increased use of chlorofluorocarbons worldwide.[94] The world community showed that it was capable of acting swiftly and in concert when required to do so. The 1985 Vienna Convention on Protection of the Ozone Layer – followed two years later in 1987 by the Montreal Protocol on Protection of the Ozone Layer – committed states parties to meeting targets for reductions and the eventual phasing out of ozone depleting substances.[95] By late 2002, 183 states had ratified the Montreal Protocol. Although an apparent example of speedy and determined action, the early commitments made by states parties were in fact to increase production of chlorofluorocarbons before eventually reducing these.[96]

90 See, generally, University of Idaho, 'Trail Smelter Arbirtration, 1938/1941', www.law.uidaho.edu/default.aspx?pid=66516.

91 Birnie and Boyle, *International Law and the Environment*, *supra* note 10, at 121.

92 *Ibid*., at 191.

93 *Ibid*., at 504-5.

94 See, for example, Virtual Globe, '1982: Ozone Hole Discovered Above the South Pole', www.virtualglobe.org/en/info/env/02/ozone09.html.

95 Vienna Convention for the Protection of the Ozone Layer, Vienna, 22 March 1985, in force 22 September 1988, 26 *International Legal Materials* (1987) 1529, www.unep.org/ozone/pdfs/viennaconvention2002.pdf; Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, in force 1 January 1989, 26 *International Legal Materials* (1987) 154, www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf.

96 See, generally, J. Gribbin, *The Hole in the Sky* (Corgi: London, 1988).

The United Nations Framework Convention on Climate Change (UNFCCC),[97] which sought to have its states parties commit firmly to reductions in emissions of substances that contribute to global warming, was also adopted at UNCED. While 'reaffirming the principle of sovereignty of States in international co-operation to address climate change', the states parties 'acknowledg[ed] that change in the Earth's climate and its adverse effects are a common concern of humankind.'[98] Although a lukewarm commitment and protective once again of the jealously guarded idea of sovereignty, the UNFCCC set the stage for concrete emissions control targets to be agreed to in further Protocols. When the states parties to UNFCCC negotiated the text, they were well aware that – in itself – the Convention would be hopelessly inadequate to meet the challenges of climate change. The 1997 Kyoto Protocol[99] to the Convention was intended to remedy this.[100] The Protocol significantly strengthens the Convention 'by committing Annex I [industrialized] Parties to individual, legally-binding targets to limit or reduce their greenhouse gas emissions.'[101] The Protocol received sufficient ratifications to come into force only in February 2005, ninety days after at least 55 states parties, including Annex I states accounting for at least 55 percent of the total 1990 carbon dioxide emissions from that group, had ratified.[102] The fact that it is now in force can be seen as testament to a welcome determination by the global community to deal with the problem of global warming, even in the face of the refusal by the largest emitter of greenhouse gases, the United States, to ratify.

Marine pollution

In 1954 the International Convention for the Prevention of Pollution of the Sea by Oil,[103] a precursor of later marine pollution conventions which would also deal with pollutants other than oil, was signed. The main concern of the 1954 Convention was operational discharge; the world was not yet overly concerned with major oil spills. Marine pollution received further attention in 1958, with the Conventions on the Law of the Sea signed in Geneva. However, protection of the marine environment generally was given little attention and the Convention focused – as

97 United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

98 Preamble, *ibid.*

99 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, unfccc.int/resource/docs/convkp/kpeng.pdf

100 See, for example, UNFCCC Secretariat, 'Kyoto Protocol', unfccc.int/essential_background/kyoto_protocol/items/2830.php.

101 *Ibid.*

102 For the status of ratifications of the Kyoto Protocol, see unfccc.int/essential_background/kyoto_protocol/status_of_ratification/items/2613.php.

103 International Convention on for the Prevention of the Sea by Oil, London, 12 May 1954, in force 26 July 1958, 37 *United Nations Treaty Series* 3.

the 1954 OILPOL Convention had done – on operational discharge. The Conventions seemed to suggest, as Birnie and Boyle put it, that states 'enjoyed substantial freedom to pollute the oceans, moderated only by the principle that high seas freedoms must be exercised with reasonable regard for the rights of others.'[104]

The realities of large marine oil spills first came home in 1967, with the grounding – caused by human error – off the English coast of the tanker *Torrey Canyon*, which spilled some 120,000 tonnes of oil. Marine pollution control was at the time in its infancy and the United Kingdom was unprepared to deal with the disaster.[105] The incident led to a number of marine pollution conventions being signed in 1969[106] and in the early 1970s. In 1973, the 1954 OILPOL Convention was replaced by the International Convention for the Prevention of Pollution from Ships.[107] The MARPOL Convention never came into force, but in 1978 was subsumed into a Protocol which has come into force.[108] The MARPOL Convention covers pollution from ships at sea by substances other than oil. In a set of six annexes, the Convention deals respectively with oil, noxious liquid substances carried in bulk, harmful substances carried in packaged form, sewage, garbage generated on vessels, and atmospheric pollution from ships. States parties are required to adopt Annexes 1 and 2, and may adopt the others.

Another major oil spill from a tanker in 1989 occurred when the *Exxon Valdez* ran aground in Prince William Sound, Alaska. The impact on the psyche of the American people was significant, with the images of a pristine environment spoiled reverberating to this day.[109] Ironic comment on the disaster has been made, however, by Al Gore, former Vice-President of the United States: 'when expenditures are required to clean up […] pollution, they are usually included in the national accounts as another positive entry on the ledger. In other words, the more pollution

104 P. Birnie and A. Boyle, *International Law and the Environment*, *supra* note 10, at 351.

105 See, for example, International Maritime Organization, 'Prevention of Pollution by Oil', www.imo.org/Environment/mainframe.asp?topic_id=231.

106 International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Brussels, 29 November 1969, in force 6 May 1975, 970 United Nations Treaty Series 211, www.imo.org/Conventions/contents.asp?doc_id=680&topic_id=258; and International Convention on Civil Liability for Oil Pollution Damage, Brussels, 29 November 1969, in force 19 June 1975, 973 United Nations Treaty Series 3, www.imo.org/Conventions/contents.asp?topic_id=256&doc_id=660.

107 International Convention for the Prevention of Pollution from Ships (MARPOL), London, 2 November 1973, amended before entry into force, 12 *International Legal Materials* (1973) 1085, www.imo.org/Conventions/contents.asp?doc_id=678&topic_id=258.

108 Protocol Relating to the Convention for the Prevention of Pollution from Ships, London, 17 February 1978, in force 2 October 1983, 17 *International Legal Materials* (1978).

109 See, for example, ExxonMobil, 'Valdez', www.exxonmobil.com/Corporate/Newsroom/NewsReleases/Corp_NR_Valdez.asp and Emergency Response, 'Prince William Sound: An Ecosystem in Transition', response.restoration.noaa.gov/topic_subtopic_entry.php?RECORD_KEY%28entry_subtopic_topic%29=entry_id,subtopic_id,topic_id&entry_id(entry_subtopic_topic)=238&subtopic_id(entry_subtopic_topic)=13&topic_id(entry_subtopic_topic)=1.

we create, the more productive contributions we can make to national output. The *Exxon Valdez* oil spill in Prince William Sound, and efforts to clean it up, to take one example, actually increased our GNP.'[110]

Pollution from chemicals and wastes

In 1956, the Minamata (or Minamoto) disaster in Japan occurred, where it became apparent that contamination from mercury waste was causing illnesses and birth defects. This drew the world's attention to the dangers of uncontrolled industrialization. It was not, however, until 1968 that the Japanese government finally acknowledged the source of the pollution and chemical dumping finally ceased.[111] The Minamata disaster shows both how the courage of individuals can lead to change – the contamination caused Japanese fishermen to riot at a factory in 1959 and bring a number of court actions against the large corporations responsible – and also how slow governments can be to act.

The early 1960s saw increasing awareness of the scale of environmental problems facing the international community. As part of this new awareness 1962 saw the publication of a book which might arguably be described as the "bible" of environmental literature. After the Second World War, a "miracle" pesticide – dichlorodiphenyltrichloroethane (DDT) – was much used. The pesticide was not directly harmful to humans. In 1962, however, scientist Rachel Carson published *Silent Spring*,[112] which documented how DDT works its way up through the food chain, ultimately having devastating environmental effects. This did much to increase understanding of ecological linkages. Pilloried by the chemical industry, Carson died from cancer in 1964 without ever knowing that her work eventually had the influence she would have wanted it to have. It was not long before *Silent Spring* was recognized to be accurate, and it was not long before environmental concern became an essential part of the 1960s zeitgeist.

In 1978, a national incident in the United States – the *Love Canal* disaster – in which it was realized that industrial chemicals buried secretly in a town had, for years, been causing inordinately high rates of cancer and children to be born with congenital defects focused attention worldwide on the health problems of dumping

110 A. Gore, *Earth in the Balance: Forging a New Common Purpose* (Earthscan Publications: London, 1992) at 187.

111 See, for example, The Free Encyclopedia, 'Minamata Disease', encyclopedia.thefreedictionary.com/Minamata%20disease.

112 Rachel Carson, *Silent Spring* (Hamish Hamilton: London, 1962). See also, for example, www.rachelcarson.org/.

of hazardous chemicals.[113] It was thanks to the activism of individual residents – particularly a local mother named Lois Gibbs – that the problem was discovered and the causes identified.[114]

A pollution tragedy occurred in 1984, when there was a chemical leak from the Union Carbide factory in Bhopal, India.[115] Some 2,000 people died almost immediately and some 15,000 died later; 150,000-600,000 were injured.[116] The disaster showed how, in a globalized world, a disaster within national borders could be blamed on the actions of foreign states or private companies. Union Carbide, an American company, was apparently taking advantage of less stringent environmental standards in the developing world. In a 1992 settlement agreement, Union Carbide agreed to pay USD 470 million to the victims, a figure almost certainly substantially less than would have been ordered had the accident occurred in the United States.

Regarding pollution from wastes, two important conventions on the transportation of hazardous waste are the 1989 Convention on Transboundary Movement of Hazardous Wastes and their Disposal[117] and the 1991 Organization of African Unity[118] Convention on the Ban of the Import into Africa and the Control of Transboundary Movements and Management of Hazardous Wastes within Africa.[119] Of the two, interestingly enough, it is the Bamako Convention which contains the stronger provisions, such as the general obligation that:

> All Parties shall take appropriate legal, administrative and other measures within the area under their jurisdiction to prohibit the import of all hazardous wastes, for any reason, into Africa from non-Contracting Parties. Such import shall be deemed illegal and a criminal act.[120]

Radioactive pollution

The International Atomic Energy Agency (IAEA) was created in 1956, the dangers of nuclear proliferation being a particular concern following the Second World

113 See, for example, Eckardt C. Beck, 'The Love Canal Tragedy', *Environmental Protection Agency Journal* (1979), www.epa.gov/history/topics/lovecanal/01.htm.

114 See, for example, Center for Health, Environment and Justice, 'Love Canal Dates', www.chej.org/LCdates.htm.

115 See, for example, Union Carbide, Bhopal Information Site, www.bhopal.com/.

116 See, for example, Wikipedia, 'Bhopal Disaster', www.en.wikipedia.org/wiki/Bhopal_Disaster.

117 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, in force 24 May 1992, 28 *International Legal Materials* (1989) 657, www.basel.int/text/con-e.htm.

118 Now the African Union

119 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, note yet in force, 30 *International Legal Materials* (1991) 775, sedac.ciesin.columbia.edu/entri/texts/acrc/bamako.txt.html.

120 Article 4(1), 'General Obligations', *ibid.*

War. A number of international conventions on nuclear energy were to follow in the 1960s. Following the 1986 Chernobyl nuclear disaster in what is today Ukraine, the two 1986 IAEA Conventions: the Convention on Early Notification of a Nuclear Accident and the Convention on Assistance in the case of a Nuclear Accident or Radiological Emergency were adopted.[121] Once again, the world community showed that it could respond quickly to environmental problems, but that it will usually take an international disaster to prompt it to do so.

In 1985, France was preparing to conduct nuclear weapon testing in the South Pacific. In protest, the environmental organization Greenpeace was preparing to sail its ship, *Rainbow Warrior*, into the path of the proposed test fallout. While at anchor in Auckland harbour, New Zealand, the *Rainbow Warrior* was sunk by a bomb placed on the boat. A crewman, Fernando Pereira, was killed. France initially denied involvement; but finally conceded responsibility after several members of its armed forces were arrested and put on trial in New Zealand.[122] Arbitration followed and in 1986 United Nations Secretary General Javier Perez de Cuellar ruled that France was to make a formal apology and to pay USD seven million to New Zealand; in a later adjunct arbitration France was ordered to pay a further USD two million. Greenpeace, in a separate arbitration led by Dr Claude Reymond in 1987, was awarded approximately USD seven million. France also paid reparations to the family of Fernando Pereira, by agreement.[123] The significance of the case for international environmental law can hardly be overstated. A state, one of the five permanent members of the United Nations Security Council, had apparently "gone to war" with a non-governmental environmental protest group, and had then submitted to international arbitration and been required to pay reparations.

The Course of International Environmental Law

It is difficult to know which of the many significant individuals who have contributed to the development of international environmental law – nor which environmental disasters – to include in such a short paper. It appears that, to a large extent, the rise of international environmental law has been driven and directed by the courage of individual people and by the zeitgeist of the times they represent. It

121 Convention on Early Notification of a Nuclear Accident, Vienna, 26 September 1986, in force 27 October 1986, 25 *International Legal Materials* (1986) 1370, www.iaea.org/Publications/Documents/Conventions/cenna.html; Convention on Assistance in Case of Nuclear Accident or Radiological Emergency, Vienna, 26 September 1986, in force 26 February 1987, 25 *International Legal Materials* (1986) 1377, www.iaea.org/Publications/Documents/Conventions/cacnare.html.

122 See, generally, The Sunday Times Insight Team, *Rainbow Warrior: The French Attempt to Sink Greenpeace* (Key Porter Books: Toronto, 1986).

123 See, for example, Transnational Environment Law, 'Case No. 6: "The Rainbow Warrior"', www.jura.uni-muenchen.de/einrichtungen/ls/simma/tel/case6.htm.

has been shaped equally by the occurrence of environmental disasters, for which the world has never seemed properly prepared.

At the beginning of the 21st Century we have many new legal tools with which to tackle environmental problems, yet many familiar problems. There is an international environmental court or, at least, Chamber of the ICJ. There are international agreements and firm commitments to them by their states parties. There are coherent guidelines for sustainable development practice. There are environmental principles recognized by states as approaching the status of fundamental rights, although these tend still to be seen as non-binding soft law.

Many specific problems have yet to be dealt with. For instance, it seems likely that within the next few years there will be a resumption of both the ivory trade and commercial whaling. The clash between the proponents of sustainable consumptive use and preservation is yet to be resolved. Within the context of the International Whaling Commission, for example, Japan, firmly in the sustainable use camp, has in recent years sought to bring into the voting arena many small nations which support its pro-whaling views.[124] Western countries criticising this as mercenary behaviour forget that, arguably, it was only through similar tactics that they managed in 1982 to garner enough votes for a moratorium on commercial whaling.

Environmental disasters are ongoing, and the world still seems woefully unprepared to meet them. Despite the various conventions agreed to in the area of marine pollution, there are still single-hulled tankers of dubious seaworthiness carrying large quantities of oil through dangerous seas. In November 2002, the oil tanker *Prestige* broke up some 130 miles off the coast of Spain with the resulting spill causing serious damage to the Spanish coastline and to fishery beds.[125] In July 2003, the tanker *Tasman Spirit* grounded at the entrance to Karachi Port, Pakistan, spilling some 30,000 tonnes of oil and closing fishery beds for several months.[126]

The difficulties caused by the importance given to the doctrine of state sovereignty are still a hindrance to effective international environmental protection, despite the efforts by the drafters of international instruments like the Convention on Biological Diversity and the UN Framework Convention on Climate Change. The species-based approach to wildlife conservation remains a hindrance to effective protection, despite the holistic approaches taken in more recent international

124 Such as Benin, Gabon, Mongolia, Palau, St. Kitts and Nevis, St. Lucia and St Vincent and the Grenadines. For the full membership list see www.iwcoffice.org/commission/iwcmain.htm#nations.

125 See, for example, International Tanker Owners Pollution Federation Limited, 'Case Histories: Prestige (Spain, 2002)', www.itopf.com/casehistories.html#prestige.

126 See, for example, International Tanker Owners Pollution Federation Limited, 'Case Histories: Tasman Spirit (Pakistan, 2003)', www.itopf.com/casehistories.html#tasmanspirit.

instruments like the Convention on Biological Diversity, the Convention on the Conservation of Migratory Species of Wild Animals and the Convention for the Conservation of Antarctic Marine Living Resources.

Overfishing of the world's oceans is today a greater problem than it has ever been. The efforts of the drafters of Conventions aimed at the protection of fisheries, such as CCAMLR, have not kept pace with the technological expertise of fishermen, nor have the various marine pollution conventions proved effective in combating pollution of the seas, either by way of dramatic oil spills or the continual hazard of operational discharge from the countless vessels plying the seas daily. Much remains for both individuals and states to do, and it is important that an understanding of the past informs the future.

Background and Evolution of the Principle of Permanent Sovereignty over Natural Resources[1]

Tuomas Kuokkanen[2]

Introduction

When reading environmental agreements or declarations one may find it strange to discover that a number of texts refer to the principle of permanent sovereignty over natural resources or to states' sovereign right to exploit their own resources pursuant to their own environmental policies. Due to their international nature managing environmental problems would seem to require international co-operation. The principle of permanent sovereignty over natural resources appears, therefore, not to sit comfortably in the environmental sphere.

In fact, the principle of permanent sovereignty over natural resources germinated and grew, not in an environmental context but in relation to the doctrine of expropriation of foreign property. The principle began to develop after the Second World War when a number of colonies became independent. Despite their independence, natural resources in these former colonies where still owned or exploited by foreigners through concession agreements. Newly independent states regarded that traditional rules of international law were obstacles for their development as they protected foreign property rights rather than allowed countries to freely exploit their own natural resources. Therefore, they initiated under the auspices of the

1 This paper is based on a lecture given by the author on 23 August 2005 and on the work: Tuomas Kuokkanen, *International Law and the Environment: Variations on a Theme*, The Erik Castrén Institute of International Law and Human Rights, Vol. 4 (Kluwer Law International: The Hague/London/New York, 2002).

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United Nations a process to amend the traditional doctrine on the protection of foreign property.

In order to better understand the background to the principle of permanent sovereignty over natural resources, this article first examines the traditional doctrine of expropriation of foreign property. Thereafter, it deals with the development of the principle as a reaction against this traditional doctrine. The article ends with a discussion on the integration of the principle into the environmental and sustainable law contexts.

The Traditional Law of Natural Resources

During the 19th Century and the first half of the 20th Century foreign investors concluded several concession arrangements with host countries granting them exploitation rights. In international law, such agreements have been regarded as acquired rights which, as such, have been equated with property rights. The traditional principles of international law sought to protect alien property by establishing certain minimum rights. In case a state violated those minimum rights, an alien's own government was entitled to exercise diplomatic protection. The rationale behind the protection provided by international law was to ensure that the rights of foreign investors were not left subject solely to unilateral action by host states. The *Case concerning forests in Central Rhodophia between Greece and Bulgaria,* relating to the peace settlement after the First World War, provides an example of the requirement to respect acquired rights. In the case, the Greek government acted on behalf of certain Greek nationals who, during the Ottoman regime, had acquired rights of property and exploitation in forests situated in Central Rhodophia, a territory ceded to Bulgaria by the Ottoman Empire in 1913. Soon thereafter, the Bulgarian authorities declined to recognize the rights acquired by Greek nationals. The arbitrator in the case found that the attitude of the Bulgarian government concerning the felling rights was incompatible with the respect for acquired rights imposed upon Bulgaria by an international treaty.[3]

The traditional doctrine concerning the expropriation of foreign property is based on a distinction between lawful and unlawful taking. The expropriation of foreign property, according to the traditional approach, is unlawful unless justified by international law. A taking is justified, pursuant to the traditional view, if it is concluded for a public purpose, without discrimination and is accompanied with compensation. The first of the three classical justifications for the taking of foreign property, the requirement that the taking be for a legitimate public purpose, has

3 See *International Arbitral Awards of Östen Undén Arbitration under Art. 181 of the Treaty of Neuilly* (hereinafter *Treaty of Neuilly Arbitration*), 28 *American Journal of International Law* (1934) 760-807.

been regarded as a necessary condition for legality.[4] According to the doctrine, a mere reference to a public interest is not sufficient; there has to be a genuine, or legitimate, public interest to justify the measures taken. The second classical requirement, the principle of non-discrimination, means that a taking must not be directed against foreigners, as such. In the words of the Permanent Court of International Justice, 'discrimination based upon nationality and involving differential treatment by reason of their nationality as between persons belonging to different national groups'[5] is forbidden. Pursuant to the third requirement, the taking of foreign property becomes unlawful unless compensation is made. In other words, the lawfulness of expropriation depends on the payment of proper compensation.[6] Damages include both the immediate loss suffered (*damnum emergens*) as well as lost profits (*lucrum cessans)*.[7] The so-called Hull doctrine further specified that the concept of just compensation means prompt, effective and adequate compensation.[8] The primary remedy for unlawful taking, according to the traditional doctrine, is restitution in kind and if that is not possible or practicable, just compensation.[9] For example, in the *Case concerning forests in Central Rhodolphia between Greece and Bulgaria*, the arbitrator first examined whether the obligation of restoring the forests to the claimants could be imposed upon the respondent. Having found that restoration was not practicable, the arbitrator awarded compensation.[10]

4 See, for example, *Norwegian Shipowners' Claims (Norway v. United States)*, I *United Nations Reports of International Arbitral Awards* 307, at 332.

5 *Oscar Chinn Case (United Kingdom v. Belgium) (Judgement)*, PCIJ Series A/B, No. 63 (1934) 87.

6 See Memorial Submitted by the Government of the United Kingdom in the *Anglo-Iranian Oil Co. Case (United Kingdom v. Iran)*, ICJ Pleadings (1951) 64 at 102.

7 See, for example, *Affaire du Cape Horn Pigeon*, IX *United Nations Reports of International Arbitral Awards* 63-66 at 65.

8 In 1938, the United States Secretary of State, Cordell Hull, and the Mexican Minister for Foreign Affairs, Eduardo Hay, exchanged notes concerning the payment of compensation for lands expropriated in Mexico since 1927. In the course of these exchanges, Mr. Hull specified the requirement of just compensation.

9 *Case Concerning the Factory at Chorzów (Germany v. Poland) (Claim for Indemnity) (Judgement on the Merits)* PCIJ, Series A, No. 17 (1928) 47.

10 See *Treaty of Neuilly Arbitration*, *supra* note 3 at 802: 'The Arbitrator is of the opinion that the obligation of restoring the forests to the claimants cannot be imposed upon the defendant. There are several reasons which may be given in favor of this opinion. The claimants in whose behalf a claim put forward by the Greek Government has been held admissible, are partners in a commercial organization composed of other partners as well. It would therefore be inadmissible to compel Bulgaria to restore integrally the disputed forests. Moreover, it is hardly likely that the forests are in the same condition that they were in 1918. Assuming that most of the rights in the forests are rights of cutting a fixed quantity of wood, to be removed during a certain period, a decision holding for restitution would be dependent upon an examination of the question whether the quantity contracted for could be actually obtained. Such a decision would also require examining and determining the rights which may have arisen meanwhile in favour of other persons, and which may or may not be consistent with the rights of the claimants. The only practicable solution of the dispute, therefore, is to impose upon the defendant the obligation to pay an indemnity.'

The Critique of the Traditional Approach

By focusing merely on the protection of private property, the traditional doctrine of expropriation of foreign property seemed to disregard, or be inconsistent with, another traditional doctrine: the principle of national sovereignty. In its critics' opinion, the traditional doctrine appeared to be both an interventionist and a repressive doctrine. It was interventionist in the sense that it intervened in the affairs of sovereign states by disregarding their sovereignty and repressive in the sense that it suppressed states' attempts to fully control and to exploit their own natural resources. For example, it was suggested that it was inappropriate to question whether an act was done for public utility purposes.[11] The principle of non-discrimination appeared also to be biased towards foreign investors as it seemed to protect foreigners who, in fact, dominated the economy. The classical doctrine on remedies was similarly vulnerable to criticism. For example, Friedman expressed doubts whether it would be appropriate to 'compel a State to make *restitutio in integrum*.'[12] Moreover, the Hull doctrine seemed to be construed innocently on the basis of the traditional doctrine but, in fact, made the standard of just compensation more stringent.

In light of the above, it can be said that the traditional doctrine shifted the position relating to foreign property rights in the manner of a pendulum swinging to an extreme position, where it provided maximum protection for foreign investors. Antonio Cassese notes that the development resulted from the fact that foreigners belonged to industrialized and powerful countries and that it was in those countries' interests to enhance the protection of foreign investments.[13] Indeed, the requirement of public purpose and non-discrimination seemed to raise the standard of lawful expropriation too high for the newly independent weaker states. Moreover, the Hull standard of prompt, adequate and effective compensation was another obstacle to expropriation. Finally, the traditional doctrine limited states' attempts to assert control over their natural resources by providing restitution in kind as a remedy for unlawful expropriations. Consequently, the traditional law appeared to create an obstacle for the economic development of newly independent states. To reform this area of international law, a revolutionary process to amend the traditional doctrine commenced under the auspices of the United Nations.

11 Gillian White, *Nationalisation of Foreign* Property (Praeger: New York, 1961) at 150.

12 S. Friedman, *Expropriation in International Law* (Stevens and Sons: London, 1953) at 214 (footnote omitted).

13 Antonio Cassese, *International Law in a Divided World* (Oxford University Press, 1986) at 319-320.

The Resolution on Permanent Sovereignty Over Natural Resources

After the Second World War a number of colonies became independent. However, to a large extent, foreigners still either owned or exploited through concession agreements the natural resources of the newly independent states. As Cassese notes, there was a contrast between economic development and sovereignty over national resources, and foreign exploitation of these resources.[14] Gradually, in the view of the newly independent states concession agreements became symbols of interference with a state's sovereignty over its natural resources.[15] The traditional concessions concluded during the colonial period were deemed to be 'inequitable and onerous arrangements.'[16] As a first step, host countries began to tax foreign companies in order to receive a share of their profits. Hossein characterizes these enactments as the beginning of a process whereby governments started to claim an economic rent generated by their natural resources.[17] Some governments further strengthened their positions by forming companies wholly owned by the state.

As the newly independent states often lacked sufficient capital and technical know-how, they often had to rely on the knowledge and expertise of foreign companies. However, it was found in the late 1950s and 1960s, particularly within the petroleum industry, that joint ventures were more equitable than traditional concession arrangements.[18] These developments reflected the growing desire on the part of the newly independent states for economic self-determination and the establishment of conditions under which they could freely exploit their own natural resources. Just like the colonization process, which was largely driven by the desire of the great powers to take over the colonies' natural resources, the desire to return sovereignty over natural resources to the newly independent states became one of the underlying themes of the process of decolonization.[19]

14 *Ibid.*, at 323.

15 L. Henkin et al., *Restatement of the Law Third, Foreign Relations Law of the United States* (American Law Institute: Philadelphia, 1987), vol. 2 at 213.

16 See Kamal Hossain, 'Introduction', in Kamal Hossain and Subrata Roy Chowdhury (eds.), *Permanent Sovereignty Over Natural Resources in International Law* (St. Martin's Press: New York, 1984) ix-xx at ix.

17 Kamal Hossain, *Law and Policy in Petroleum Development: Changing relations between transnationals and governments* (Nichols: New York, 1979) at 13.

18 *Ibid.*, at 17-19.

19 Broms notes that the fact that the colonial powers felt no obligation to grant control over natural resources to local populations led to deep dissatisfaction among the local leaders who understood the value of natural resources. See Bengt Broms, 'Natural Resources, Sovereignty over', III *Encyclopedia of Public International Law* (Max Planck Institute for Comparative Public Law and International Law: Heidelberg, 1997) 520-524 at 520.

The question of the right of each country to exploit freely its natural wealth arose in the United Nations General Assembly for the first time in 1952 when Resolution 626(VII) was adopted. Thereafter, the issue of the permanent sovereignty of peoples and nations over their natural wealth and resources was raised before the Commission on Human Rights in conjunction with the preparation of the draft international covenants on human rights. In the course of the preparation of the draft covenants, a Commission on Permanent Sovereignty over Natural Resources was established to conduct a full survey of the matter. On the basis of a draft prepared by this Commission, the General Assembly adopted Resolution 1803(XVII) on Permanent Sovereignty over Natural Resources on 14 December 1962.[20] The main challenge in the elaboration of the resolution was to find a formula that would recognize the sovereignty of developing countries over their natural resources while providing adequate guarantees for potential investors against arbitrary interference with acquired rights. In the course of drafting the resolution, the text was modified so that ultimately a large number of states could support its adoption. The resolution, as Wolfgang Friedmann put it, aimed at expressing a consensus of the views of capital-exporting and capital-importing countries.[21] In its final form, Paragraph 4 of the resolution reads as follows:

> Nationalization, expropriation or requisition shall be based on grounds or reasons of public utility, security or the national interest which are recognized as overriding purely individual or private interests, both domestic and foreign. In such cases the owner shall be paid appropriate compensation, in accordance with the rules in force in the State taking such measures in the exercise of its sovereignty and in accordance with international law.

The paragraph indicated that the law was in a state of flux. The traditional concept of prompt, adequate and effective compensation was replaced by appropriate compensation. At the same time, the traditional requirements of public purpose and non-discrimination were still maintained. Moreover, compensation was to be paid in accordance with both the rules of international law and respective national legislation. However, as the paragraph still contained a reference to international law the question remained open as to whether the resolution, in fact, modified established international law. Nevertheless, the adoption of the resolution was the

20 Permanent Sovereignty Over Natural Resources, GA Res. 1803 (XVII), 14 December 1962. The resolution was adopted by 87 votes to 2, with 12 abstentions. For the development of the principle of permanent sovereignty over natural resources through the political organs of the United Nations in the period up to 1962, see Karol N. Gess, 'Permanent Sovereignty over Natural Resources. An Analytical Review of the United Nations Declaration and Its Genesis', 13 *International and Comparative Law Quarterly* (1964), 398-449; James N. Hyde, 'Permanent Sovereignty over Natural Wealth and Resources', 50 *American Journal of International Law* (1956) 854-867; George Elian, *The Principle of Sovereignty over Natural Resources* (Sijthoff & Noordhof: Alphen aan den Rijn 1979) at 83-100; Nico Schrijver, *Sovereignty over Natural Resources: Balancing Rights and Duties* (Cambridge University Press, 1997) at 36-81.

21 Wolfgang Friedmann, 'Social Conflict and the Protection of Foreign Investment', 57 *American Society of International Law Proceedings* (1963) 126-143 at 130.

first step towards recognizing the sovereignty of the newly independent states over their natural resources and creating 'a legal atmosphere that [was] not dominated by the colonial and imperial past.'[22]

Towards a New International Economic Order

In the 1960s, developing countries began to criticize traditional commercial principles such as reciprocity, non-discrimination and free trade, as well as international economic institutions, in particular the IMF, the International Bank for Reconstruction and Development (the World Bank) and GATT. From developing countries' point of view, international integration did not sufficiently take into account their special circumstances but rather favoured strong western countries and transnational corporations.[23] The first United Nations Conference on Trade and Development (UNCTAD) meeting held in 1964 represented a shift towards a new approach. During the conference, the Group of 77 made a historical joint declaration in which they pledged to strengthen their unity in the future.[24] After UNCTAD I, developing countries continued to press for new demands. They argued that it was necessary to formulate a new charter to establish a more just world order because the international legal instruments on which international economic relations were based were precarious. Consequently, UNCTAD III, held in 1972, decided to commence preparation of a document listing the economic rights and duties of states. Two years later, on 12 December 1974, the General Assembly adopted the Charter of the Economic Rights and Duties of States, by resolution 3281(XXIX).[25] In addition, the 6th Special Session of the General Assembly, held on 9 April – 2 May 1974, adopted a Declaration on the Establishment of a New International Economic Order[26] and a Programme of Action on the Establishment of a New International Economic Order,[27] which together with the Charter of the Economic Rights and Duties of States

22 Richard A. Falk, 'The New States and International Legal Order', 118 *Recueil des Cours de l'Académie de Droit International* (1966-II) 7-103 at 95.

23 See Marthinus Gerhardus Erasmus, *The New International Economic Order and International Organizations, Towards a Special Status for Developing Countries?* (Haag und Herchen: Frankfurt/Main, 1979) at 40-43.

24 See Joint Declation of the Group of 77 at the United Nations Conference on Trade and Development I, 1964, made at the conclusion of the Conference, Geneva, 15 June 1964. See Alfred George Moss and Harry N.M. Winton,, *A New International Economic Order: Selected Documents 1945-1975* (UNITAR: New York, 1976), vol. I at 33-34.

25 Charter of Economic Rights and Duties of States, GA Res. 3281 (XXIX), 12 December 1974, *Yearbook of the United Nations 1974*, 403-407. For background to the Charter, see Milan Bulajić, *Principles of International Development Law: Progressive Development of the Principles of International Law Relating to the New International Economic Order* (2nd ed., Martinus Nijhoff: The Hague, 1993) at 75-199.

26 Declaration on the Establishment of a New International Economic Order, GA Res. 3201 (S-VI), 1 May 1974, *Yearbook of the United Nations 1974*, 324-326.

27 Programme of Action for the Establishment of a New International Economic Order, GA Res. 3202 (S-VI), *Yearbook of the United Nations 1974*, at 326-332.

form the three basic pillars of the New International Economic Order (NIEO).

The underlying theme of the NIEO was to strengthen the economic independence of developing countries. With regard to states' full permanent sovereignty over their natural resources, Article 2, Paragraph 1 of the Charter of the Economic Rights and Duties of states reads as follows:

> Every State has and shall freely exercise full permanent sovereignty, including possession, use and disposal, over all its wealth, natural resources and economic activities.[28]

The right of every state to nationalize foreign-owned property was construed as a corollary or an expression of permanent sovereignty. According to Article 2(c) of the Charter, each State has the right:

> To nationalize, expropriate or transfer ownership of foreign property, in which case appropriate compensation should be paid by the State adopting such measures, taking into account its relevant laws and regulations and all circumstances that the State considers pertinent.

Unlike the Resolution on Permanent Sovereignty over Natural Resources, the Charter does not contain any reference to international law as a standard to be applied when determining the amount of compensation. Developing countries insisted on the deletion of the phrase due to their concern that industrialized countries would construe it to mean prompt, adequate and effective compensation.[29] The two other traditional conditions for a lawful taking, non-discrimination and public purpose, were also deleted. The element of non-discrimination was generalized to a requirement concerning relations between states meaning, in particular, that developed countries should grant generalized preferential, non-discriminatory treatment to developing countries. Furthermore, it was argued that nationalization by definition meant the taking of property for public use.

However, the significance of the New International Economic Order was reduced by the fact that many developed states were reluctant to recognize its legal authority. A number of industrialized countries voted against the adoption of the Charter of the Economic Rights and Duties of States. Moreover, a few industrialized coun-

28 See also Paragraph 4(e), Declaration on the Establishment of the NIEO, *supra* note 26: 'Full permanent sovereignty of every State over its natural resources and all economic activities'; and Chapter I, para.1, Programme of Action on the Establishment of the NIEO, *supra* note 27: 'All efforts should be made: (a) To put an end to all forms of foreign occupation, racial discrimination, *apartheid*, colonial, neo-colonial and alien domination and exploitation, through the exercise of permanent sovereignty over natural resources.'

29 Eduardo Jiminéz de Aréchaga, 'Application of the Rules of State Responsibility to the Nationalization of Foreign-Owned Property', in Kamal Hossain (ed.), *Legal Aspects of the New International Economic Order* (Pinter: London, 1980) 220-233 at 225-226.

tries abstained from the vote because the Charter, unlike the 1962 Resolution on Permanent Sovereignty over Natural Resources, did not contain any reference to international law. Nor were the principles proclaimed by the New International Economic Order supported by state practice. In fact, state practice appeared to deviate from the New International Economic Order. For instance, after the adoption of the Charter of the Economic Rights and Duties of States, many developing countries concluded bilateral investment protection treaties in order to attract foreign investments.[30]

Moreover, the New International Economic Order was not, unlike the principle of permanent sovereignty over natural resources, confirmed by case law. For instance, despite the fact that the Iran-United States Claims Tribunal has in its case law implicitly recognized a state's right to nationalize property, it has nevertheless required full compensation for such nationalizations. In the *Texaco case*,[31] sole arbitrator Dupuy regarded the Charter of the Economic Rights and Duties of States 'as a political rather than a legal declaration.' However, he found that the Resolution on Permanent Sovereignty over Natural Resources appeared to 'reflect the state of customary law.'[32] In view of the above divergence, the Charter of the Economic Rights and Duties remained a political rather than a legal document containing mainly *de lege ferenda* or policy considerations.[33] In contrast, the 1962 Resolution on the Permanent Sovereignty over Natural Resources appeared to be generally acceptable as it included an explicit reference to international law.

Integrating Development and Environment

In the early 1970s, environmental problems primarily affected industrialized countries. In these circumstances, developing countries were concerned that environmental protection standards might slow their own economic development. They deemed that it was in their interest to focus on economic development rather than on environmental protection and to oppose strict environmental standards. Apparently, the principle of permanent sovereignty over natural resources served as a sort of defence for developing countries against industrialized countries' demands for environmental regulations. For example, the principle of permanent

30 Referring to this development, Pellonpää notes that by the late 1980s, 'the pendulum ha[d] swung back from the early 1970s.' See Matti Pellonpää, 'International Law and the Protection of Foreign Investments: Contemporary Problems and Trends', *Kansainoikeus: Ius Gentium* (1-2/1988) 16-77 at 16-17.

31 *Texaco Overseas Petroleum Company and California Asiatic Oil Company v. The Government of the Libyan Arab Republic*, Award on the Merits of 19 January 1977 by Sole Arbitrator Dupuy, 53 *International Law Reports* (1979) 422.

32 *Ibid*., at 492. See also *Case Concerning Armed Activities on the Territory of the Congo (Democratic Republic of the Congo v. Uganda) (Judgement)*, para. 244, www.icj-cij.org/icjwww/icjhome.htm.

33 See Ian Brownlie, 'Legal Status of Natural Resources in International Law (Some Aspects)', 162 *Recueil des Cours de l'Académie de Droit International* (1979-I) 245-318 at 255.

sovereignty over natural resources is reflected in the first part of Principle 21 of the 1972 Stockholm Declaration while the environmental approach is reflected in the second part:[34]

> States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their own environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States beyond the limits of national jurisdiction.[35]

After the Stockholm Conference, Principle 21 was repeated in several conventions and declarations.[36]

Gradually, however, as environmental problems began to threaten developing countries it was recognized that it was in the mutual interest of both developing and industrialized countries to seek common and long-term solutions to developmental and environmental issues. Industrialized countries admitted their historical contribution to environmental problems and recognized that developing countries lacked sufficient means to exercise appropriate environmental management. For their part, developing countries recognized that it was in their interest to move from the former rigid position based on reliance on national sovereignty towards international co-operation, provided that industrialized countries were willing to

34 See Louis B. Sohn, 'The Stockholm Declaration on the Human Environment', 14 *Harvard International Law Journal* (1973) 423-515 at 492; Martti Koskenniemi, 'International Pollution in the System of International Law', XVII Oikeustiede-Jurisprudentia (1984) 91-181 at 100.

35 Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972, 11 *International Legal Materials* (1972) 1416, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503

36 See, for example, Preamble, Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, London, 29 December 1972, in force 30 August 1975, 11 *International Legal Materials* (1972) 1294, www.londonconvention.org/main.htm; Preamble, Convention on Long-range Transboundary Air Pollution, Geneva, 13 November 1979, in force 16 March 1983, 18 *International Legal Materials* (1979) 1442, www.unece.org/env/lrtap/full%20text/1979.CLRTAP.e.pdf; Paragraph 21(d), World Charter for Nature, GA Res. 37/7, 28 October 1982, www.un.org/documents/ga/res/37/a37r007.htm; Article 193, United Nations Convention on the Law of the Sea, 10 December 1982, in force 16 November 1994, 21 *International Legal Materials* (1982) 1261, www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf; Preamble, Vienna Convention for the Protection of the Ozone Layer, Vienna, 22 March 1985, in force 22 September 1988, 26 *International Legal Materials* (1987) 1529, www.unep.org/ozone/pdfs/viennaconvention2002.pdf; Preamble, United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf; Article 3, Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, www.biodiv.org/doc/legal/cbd-en.pdf; Principle/Element 1(a), Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. III), www.un.org/documents/ga/conf151/aconf15126-3annex3.htm; Principle 2, Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

contribute financially to their participation.[37] They also acknowledged that many ecological processes were affecting them, and that in many cases they were more vulnerable to various adverse effects than industrialized countries. Thus, it appeared rational for both the North and the South to conclude a new global partnership for environment and development.[38]

In 1980, an Independent Commission on International Development Issues, led by Willy Brandt, delivered its report, *North-South: A Programme for Survival*.[39] The report explored ways to 'shape order from contradictions'[40] by striving to identify mutual interests between the North and the South. A few years later, the Programme for Survival was elaborated further in an environmental and developmental context by the World Commission on Environment and Development (WCED), headed by Gro Harlem Brundtland. In its report, *Our Common Future*, the World Commission focused on the reconciliation of environment and development. Having recognized that it is a mistake to separate environmental and development issues, the report introduced the concept of sustainable development.[41] Inspired by the report of the WCED[42], the United Nations Conference on Environment and Development was convened in Rio de Janeiro, on 3-14 June 1992.[43] The Conference adopted the Rio Declaration, the UNCED Forest Principles[44] and *Agenda 21*.[45] Furthermore, the Biodiversity Convention and the UN Framework Convention on Climate Change were opened for signature at the Conference.

37 See, for example, Edith Brown Weiss, 'Environmental Equity and International Law', in *UNEP's New Way Forward: Environmental Law and Sustainable Development* (UNEP: Nairobi, 1995) 7-21 at 11.

38 See Preamble, Rio Declaration, *supra* note 36: '*With the goal of* establishing a new and equitable global partnership through the creation of new levels of co-operation among States, key sectors of societies and people.'

39 Independent Commission on International Development Issues, *North-South: A Programme for Survival Report of the Independent Commission on International Development Issues* (Macmillan: Basingstoke, 1980) at 26.

40 *Ibid*., at 12-13.

41 *Ibid*., at 8-9.

42 See Report of the World Commission on Environment and Development, GA Resolution 42/187, 11 December 1987, *Yearbook of the United Nations* (1987) 679-681: '*Concerned* about the accelerating deterioration of the human environment and natural resources and the consequences of that deterioration for economic and social development. *Agrees* with the Commission that while seeking to remedy existing environmental problems, it is imperative to influence the sources of those problems in human activity, and economic activity in particular, and thus to provide for sustainable development.' The General Assembly also adopted Resolution 42/186 drawn up by an Intergovernmental Preparatory Committee of the UNEP Governing Council. See Environmental perspective to the year 2000 and beyond, GA Res. 42/186, 11 December 1987, *Yearbook of the United Nations* (1987) 661-679.

43 See UN Conference on Environment and Development, GA Res. 44/228, 22 December 1989.The General Assembly stressed, *inter alia*, that 'poverty and environmental degradation are closely interrelated and that environmental protection in developing countries must, in this context, be viewed as an integral part of the development process and cannot be considered in isolation from it.'

44 Forest Principles, *supra* note 36.

45 *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

After the Conference, sustainable development was formally institutionalized as the United Nations General Assembly established the Commission on Sustainable Development.[46] Along with the integration of environmental concerns and development interests, international environmental law and the attempts to establish a new international economic order began to lose their former importance.[47] As the concept of sustainable development encompassed both environmental and developmental elements there was, in effect, no more need to make a distinction between the environment and development. As opposed to working on separate tracks, the common objective was now '[t]he further development of international law on sustainable development giving special attention to the delicate balance between environmental and developmental concerns.'[48]

Conclusions

In light of the above, it appears that international environmental law and the law of natural resources developed until the late 1960s and early 1970s in two distinct contexts. These two processes evolved separately for historical reasons and had hardly any connection with each other. While the environmental project sought to regulate environmental problems and thereby transfer environmental issues from domestic to international jurisdiction, the development project sought to transfer issues relating to natural resources from international to domestic jurisdiction through international regulations and resolutions. As the development and environment processes were later fused together under the doctrine of sustainable law, the historical and substantive background of the principle of permanent sovereignty over natural resources became obscured. For this reason, the principle might prima facie seem to be unfettered. However, in the new context the principle is not absolute but is qualified by environmental considerations.[49]

46 See Institutional arrangements to follow up the United Nations Conference on Environment and Development, GA Res. 47/191, 22 December 1992.

47 See, for example, Thomas W. Wälde, 'A Requiem for the 'New International Economic Order': The Rise and Fall of Paradigms in International Economic Law', in Najeeb Al-Nauimi and Richard Meese (eds.), *International Legal Issues Arising Under the United Nations Decade of International Law* (Martinus Nijhoff: The Hague, 1995) 1301-1338.

48 See Paragraph 39.1, *Agenda 21*, *supra* note 45.

49 See Schrijver, *Sovereignty over Natural Resources*, *supra* note 20, at 394-395; Patricia Birnie and Alan E. Boyle, *International Law and the Environment* (2nd ed., Oxford University Press, 2002), at 138-139.

International Law-Making for the Environment: A Question of effectiveness

Ivana Zovko[1]

Introduction

Effectiveness of international environmental law lies in the international relations domain. While legal, institutional and policy instruments remain the driving force behind good global environmental governance, their effectiveness rests with non-legal factors such as lobby groups, the media, market processes, domestic politics and international policy bargaining. The question challenging the very crux of international environmental law ponders why the green crisis continues despite more than 500 legally binding and thousands of other multilateral environmental agreements (MEAs) being negotiated?[2] This paper argues that this is due in no small part to the inappropriateness of present day approaches in international environmental law-making that fail to accommodate the variety of legal, political and human dimensions of different environmental issues. This paper is specifically concerned with two issues: i) effectiveness related to the choice of the legal format of an international instrument, in particular legally binding MEAs[3] as opposed to soft law; and ii) institutional fragmentation in international environmental governance.

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2 United Nations Environment Programme, *Multilateral Environmental Agreements: A Summary*, Open-ended Intergovernmental Group of Ministers or Their Representatives on International Environmental Governance, First Meeting, New York, UNEP/IGM/1/INF/1 (18 April 2001) 3.

3 Hereinafter also referred to as treaties.

It has become evident that parties at the negotiating table are often misinformed about the advantages and the disadvantages of the available formats of international environmental norms. Namely, the principle two formats of environmental regulation that have emerged are soft law, as non-legally binding principles and standards,[4] and instruments of hard law that constitute legally binding norms. MEAs can be of a hard law as well as a soft law character. States often insist on one or the other based on the misconception that soft law is inevitably without legal effect and therefore ineffective. This is not surprising when even academics offer opinions ranging from comparing the authority of soft law to a business card that states 'B.A. Oxford (failed)'[5] to others criticising such sceptics for not looking hard enough to realize the true extent of the legal effects of soft law.[6] Ultimately, it is submitted in this paper that while it is favourable that legally binding MEAs are instituted as instruments of global environmental governance wherever possible, their legally binding character is not the pillar or the guarantee of effectiveness either in terms of insuring compliance or in terms of the accomplishment of the environmental goals pursued. One must look at the reasons why states obey international norms in the first place and, in the context of each individual environmental issue area, decide what would be the most effective and timely instrument to induce the necessary environmental change. Apart from the hard law vs. soft law debate, this paper is concerned with institutional disintegration in international environmental law, which creates unnecessary administrative costs, confuses states parties and deters third party participation, hence undermining the effectiveness of MEAs. The paper calls for additional coherence in the institutional machinery in charge of the further development of established MEAs and their enforcement as a fundamental prerequisite of good global environmental governance.

Effectiveness of International Environmental Law

International legislative activity began to flourish in the field of environmental law in the aftermath of the 1972 Stockholm Declaration[7] which brought the world's attention to the environmental question. Modern MEAs have evolved beyond a compendium of rules and regulations into international environmental regimes (IERs), viewed by Young and Levy as the 'social institutions consisting of agreed upon principles, norms, rules, procedures, and programs that govern the interac-

4 Sands refers to soft law as 'non-binding acts'. See P. Sands, *Principles of International Environmental Law* (2nd ed., Cambridge University Press, 2003) 140.

5 W.M. Reisman, 'Unratified Treaties and Other Unperfected Acts in International Law: Constitutional Functions', 35 *Vanderbilt Journal of Transnational Law* (2001) 729-747.

6 A. Boyle, 'Some reflections on the Relationship of Soft Law and Treaties', 48 *International and Comparative Law Quarterly* (1999) 901 at 913.

7 Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972, 11 *International Legal Materials* (1972) 1416, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503.

tions of actors in specific issue areas."[8] Legal discourse concerning effectiveness of MEAs and IERs spans across two decades, drawing from the rich scholarship that has evolved around international relations regime theory.[9] Effectiveness of international regimes as a concept may assume many different meanings as numerous methods exist for assessing regime effectiveness.[10] Commonly, the following are the two key evaluating factors of effectiveness: the impact of an international regime on the problems that it sets out to addresses; and employing the authority of a regime as a measurement of effectiveness – successful enforcement and compliance.

Similar evaluating criteria are employed when analysing the effectiveness of individual MEAs. Chambers, for instance, accentuates as the principal measurement of MEA-effectiveness evaluation of the forecasted changes in the targeted behaviour and ultimately in the environment, while also nominating the following critical points of effectiveness:[11] i) the level of compliance without enforceability through a system of sanctions and penalties; ii) the presence and successfulness of supplementary non-legal instruments that enhance enforcement (capacity-building); iii) treaty linkages, in particular conflicts with other international instruments that may impede upon effectiveness. All of the above criteria are also valid assessment criteria for IER effectiveness. Furthermore, the difficulty in evaluating the criteria to measure the level of impact lies in the challenge of distinguishing the many external influences that may have accounted for change in the regime's target group or activity from the actual consequences of the regime's rules and policies. The following questions must be resolved: How can one measure what has been achieved by a particular international regime? How can one relate an international regime's achievements to the standards that have emerged through the regime in question?[12]

While acknowledging that indeed the true proof of effectiveness lies in the question of whether a treaty has caused change in the behaviour of the targeted actors,

8 O.R. Young and M.A. Levy, 'The effectiveness of International Environmental Regimes', in O.R. Young (ed.), *Effectiveness of International Environmental Regimes: Causal connections and behavioural mechanisms* (MIT Press: Cambridge, Massachusetts, 1999).

9 Research on the effectiveness of international environmental regimes started in 1989 with the work of Keohane and Nye. See R.O. Keohane and J.S. Nye, *Power and Interdependence* (Longman: New York, 1989). See also A. Underdal, 'The Concept of Regime 'Effectiveness" 27 *Co-operation and Conflict* (1992) 227-40.

10 See D. F. Sprinz and H. Carsten, 'The Effect of Global Environmental Regimes: A Measurement Concept', 20 *International Political Science Review* (1999) 359-69; J. Hovi, D.F. Sprinz and A. Underdal, 'Regime Effectiveness and the Oslo-Potsdam Solution: A Rejoinder to Oran Young', 3 *Global Environmental Politics* (2003) 105.

11 B. Chambers, 'Towards an Improved Understanding of Legal Effectiveness of International Environmental Treaties', *16 Georgetown International Environmental Law Review* (2004) 501 at 530-531.

12 A similar test is put forward in J. B. Skjærseth and J. Wettestad, 'Understanding the Effectiveness of EU Environmental Policy: How Can Regime Analysis Contribute?', 11 *Environmental Politics* (2002) 99-120 at 106.

or has stopped the deterioration of the environment at the anticipated rate, this paper does not allow for an in-depth analytical assessment of the success of each individual MEA or an IER in this sense. The central case for this study is the second evaluation level: the authority of an MEA or an IER as measured by enforcement and compliance. For the purpose of this discussion, compliance is understood as states meeting their assumed obligations under MEAs, while enforcement relates to the implementation of the consequences of non-compliance with the adopted treaty obligations.[13] One must add that implementation is comprised within the notion of enforcement, and specifically refers to incorporating international norms into domestic law through 'legislation, judicial decision, executive decree or other process.'[14]

International Law-making for the Environment

Multilateral environmental agreements (MEAs)

International law commonly rests on either treaties or international custom.[15] Before the 1900s, international rules concerning the protection and preservation of the environment predominately related to resource management and exploitation and were found in treaties that were not inherently environmental.[16] From the 1911 Convention on the Preservation and Protection of the Fur Seals[17] onwards, however, specialized global international agreements dealing specifically with environmental matters began their assent. In this first period of international environmental law-making, international agreements predominately regulated issues of over-exploitation of living resources, as well as pollution of the marine environment. A clear link can be established between the negotiated treaties and the environmental disasters that prompted their negotiations, conveying the intrinsically reactive nature of international environmental law.[18]

A continuous increase in the intensity of international environmental law-making can be noted since the 1972 Stockholm Declaration, which affirmed the urgent need for an overarching strategy in global environmental governance. For

13 T.E. Crossen, 'Multilateral Environmental Agreements and the Compliance Continuum', 36 ExpressO Preprint Series (2003), law.bepress.com/cgi/viewcontent.cgi?article=1075&context=expresso.

14 D. Shelton, 'Introduction', in D. Shelton (ed.), *Commitment and Compliance: The Role of Non-binding Norms in the International Legal System* (Oxford University Press, 2000) 1-20 at 5.

15 Sources of international law as per Article 38, Statute of the International Court of Justice (ICJ), www.icj-cij.org/icjwww/ibasicdocuments/ibasictext/ibasicstatute.htm.

16 Convention establishing Uniform Regulations concerning Fishing in the Rhine between Constance and Baselle, 9 December 1869, 9 *IPE* 4695.

17 Convention Between Great Britain, Japan, Russia and the United States Respecting Measures for the Preservation and Protection of Fur Seals in the North Pacific Ocean, Washington D.C., 7 July 1911, in force 12 December 1911, 214 *Consolidated Treaty Series* 80.

18 For a more detailed overview of the link between environmental disasters and the creation of environmental regimes, see the paper by Ed Couzens in the present Review.

instance, Perrez and Roch claim that over 60 percent of existing MEAs were negotiated after 1972,[19] and only the 1990-1994 period yielded some 35 MEAs.[20] As stated above, MEA's have also now developed into international environmental regimes (IERs). Some examples of IERs include: i) the IER in place to prevent depletion of the ozone layer established under the 1985 Vienna Convention for the Protection of the Ozone Layer[21] and the 1987 Montreal Protocol on Substances that Deplete the Ozone Layer;[22] ii) the climate change regime created through the 1992 UN Framework Convention on Climate Change (UNFCCC)[23] and the 1997 Kyoto Protocol to the UNFCCC;[24] iii) the IER related to vessel-sourced pollution of the marine environment by tanker ships established by a network of conventions negotiated under the auspices of the International Maritime Organization (IMO);[25] iv) the IER concerning the movement and disposal of transboundary waste provided in the 1989 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes[26] and the 1999 Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and

19 P. Roch and F.X. Perrez, 'International Environmental Governance: The Strive Towards A Comprehensive, Coherent, Effective and Efficient International Environmental Regime', 16 *Colorado Journal of International Environmental Law and Policy* (2005) 1.

20 C. Romano, *The Peaceful Settlement of International Environmental Disputes: A Pragmatic Apoproach* (Kluwer Law International: The Hague, London, Boston, 2000) at 35.

21 Vienna Convention for the Protection of the Ozone Layer, Vienna, 22 March 1985, in force 22 September 1988, 26 *International Legal Materials* (1987) 1529, www.unep.org/ozone/pdfs/viennaconvention2002.pdf.

22 Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, in force 1 January 1989, 26 *International Legal Materials* (1987) 154, www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf. See also its 1992, 1997 and 1999 Amendments.

23 United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

24 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, unfccc.int/resource/docs/convkp/kpeng.pdf.

25 International Convention for the Prevention of Pollution from Ships, London, 2 November 1973, 12 *International Legal Materials* (1973) 1319, as amended by Protocol of 1978 relating to the International Convention for the Prevention of Pollution from Ships 1973, 1340 *United Nations Treaty Series* 61, in force 2 October 1983 (hereinafter MARPOL Convention); International Convention on Civil Liability for Oil Pollution Damage, Brussels, 29 November 1969, in force 19 June 1975, 973 *United Nations Treaty Series* 3) as amended by Protocols of 1976, 1984 and 1992, as well as the 2000 amendments; International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, Brussels, 18 December 1971, in force 16 October 1978, 1110 *United Nations Treaty Series* 57, amended by Protocols of 1976, 1984, 1992, 2000, 2003, as well as by the 2000 Amendments (the 1992 Protocol replaces the 1971 Fund Convention); International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties, Brussels, 29 November 1969, in force 6 May 1975, 970 United Nations Treaty Series 211; International Convention on Oil Pollution Preparedness, Response and Co-operation, London, 30 November 1990, in force 13 May 1995, 1891 United Nations Treaty Series 51.

26 Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, in force 24 May 1992, 28 *International Legal Materials* (1989) 657, www.basel.int/text/con-e.htm.

Their Disposal;[27] and v) the biodiversity protection and preservation regime found in the 1992 Convention on Biological Diversity (CBD)[28] and the 2000 Cartagena Protocol.[29]

International soft law

Despite the fact that the traditional understanding of international law does not recognize non-binding norms or so called soft-law as a legitimate source, this concept is firmly embedded in international environmental regulation. Given that states are more inclined to compromise their self-interest and find accord in a non-legally binding format, soft norms have been ground-breaking instruments in the evolution of international environmental law. The 1972 Stockholm Declaration and the 1992 Rio Declaration on Environment and Development[30] were surely pioneers in global environmental governance as they set an overarching framework for global environmental policy and law for the future. Unlike legally binding agreements, soft law is not in conflict with the interstate community that prioritizes sovereignty and state self-interest.

There exist numerous forms of soft law. Usually soft norms either formulate separate international instruments or they are incorporated into legally binding agreements.[31] The latter could be, for instance, treaty provisions that call on parties to 'endeavour to strive to co-operate.'[32] As for separate soft international instruments, these predominately take the form of declarations, resolutions, statements of principles and other hortatory documents. One must note that non-binding international instruments have long evolved from unenforceable statements of policies and principles into target-setting documents that more often than not are accompanied by various surveillance mechanisms supervising their enforcement. Examples of such instruments include resolutions of the Antarctic Treaty Consultative Meetings (ATCM) administered and surveyed through a system of inspections established under the Antarctic Treaty and its Environmental Protocol under the

27 Basel Protocol on Liability and Compensation for Damage Resulting from Transboundary Movements of Hazardous Wastes and Their Disposal, Basel 10 December 1999, not yet in force, www.basel.int/meetings/cop/cop5/docs/prot-e.pdf.

28 Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, www.biodiv.org/doc/legal/cbd-en.pdf.

29 Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal, 29 January 2000, in force 11 September 2003, www.biodiv.org/doc/legal/cartagena-protocol-en.pdf.

30 Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

31 As per Baxter, '[T]here are norms of various degrees of cogency, persuasiveness, and consensus which are incorporated in agreements between States but do not create enforceable rights and duties.' See R. R. Baxter, 'International Law in Her Infinite Variety' 29 *International and Comparative Law Quarterly* (1980) 549. See also C.M. Chinkin, 'Challenge of Soft Law: Development and Change in International Law' 38 *International and Comparative Law Quarterly* (1989) 850.

32 See D. Shelton, 'Introduction', *supra* note 14, at 10.

auspices of the Antarctic Treaty System (ATS).[33] What is more, an example of a soft law instrument setting concrete targets is the 1989 London Conference of the European Community pledging a reduction of chlorofluorocarbons (CFC) by 85 percent as soon as possible and by 100 percent by 2000, while the legally binding 1979 Montreal Protocol set a much lower reduction target of 50 percent by 1989.[34]

The Choice of Packaging: Legally Binding vs. Soft Law

While an international approach in environmental regulation is still clearly warranted, the question arises whether creating comprehensive and legally binding global MEAs is indeed a prerogative for achieving effective international environmental governance, and whether other types of international instruments, such as those of a soft law nature, are more appropriate in certain cases.

Legally binding MEAs: advantages and shortcomings

The primary difference between legally binding MEAs in comparison to international soft law is that states parties are legally bound to comply solely with the former. The most commonly invoked advantage of treaty law relates to a range of non-compliance mechanisms, enforcement measures, trade sanctions and dispute resolution procedures that are characteristic of legally binding instruments, and that traditionally do not complement international soft law. Non-compliance mechanisms chiefly encompass procedures, instruments and separate organs that promote compliance, address cases of non-compliance, and in general offer uniform interpretation of a treaty regime.[35] Most of the legally binding MEAs and IERs employ the formula of a framework convention followed by a more detailed protocol which is more subject-specialized and comprehensive in comparison to the convention. A number of such regimes have evolved following the 1972 Stockholm and 1992 Rio Declarations, in particular in response to at the time new environmental problems such as climate change, ozone layer depletion, desertification and others. The framework conventions negotiated to address these issues have gained overwhelming support. The UNFCCC has 189 parties, the Kyoto Protocol has 156 parties and the Vienna Convention has 190 parties. For comparison, there were 191 members of the UN as at 15 October 2005.[36] Another advantage of treaty law over soft international instruments are remedies that are readily available to

33 See C.C. Joyner, 'The Legal Status and Effects of Antarctica Recommended Measures', in Shelton (ed.), *Commitment and Compliance*, *supra* note 14, 163-195.

34 See discussion in A. Kiss, 'Commentary and Conclusions' in Shelton (ed.) *Commitment and Compliance*, *supra* note 14, 223-242 at 224.

35 Such mechanisms are for instance the Compliance Committee and Compliance Procedures adopted in accordance with Article 34 of the Cartagena Protocol, or the 1998 Non-compliance Procedure established following Article 8 of the Montreal Protocol.

36 See www.untreaty.un.org/.

those suffering damages pursuant to the violation of legally binding norms, remedies which are usually not available as a result of non-compliance with soft law.

However, neither the broad participation of the international community in a treaty regime nor a high level of compliance guarantee effectiveness of a legally binding MEA in the fundamental sense of resolving the environmental issues that it pursues. For example, the 2002 Assessment Panel concerning the depletion of the ozone layer stated that '[e]ven with full compliance of the Montreal Protocol by all Parties, the ozone layer will remain particularly vulnerable during the next decade or so.'[37]

Moreover, a legally binding MEA is not as flexible as soft law in considering the non-state actors that it targets; states parties are often unable to compel compliance by non-state entities under their jurisdiction that are subjected to the treaty regime. For instance, the OECD Report on non-compliance in the international law of marine pollution emphasized that non-compliance with environmental regulations is still profitable for the shipowner and operator and that

> nearly half of vessels inspected [by port authorities] violate at least one aspect of the international environmental rules concerning the stowage and disposal of oil.[38]

In sum, the effectiveness of legally binding MEAs and IERs may be weakened on account of several different factors.

Limitations in the scope of state commitments and concrete target-setting
Crossen warns that the obligations within global MEAs reflect 'no more than current domestic policies.'[39] It is unlikely that the scope of legally binding rules will ever be strengthened to the necessary extent in a hard law agreement given that its legally binding nature implies potential state responsibility for non-compliance.

Leaving outside the regime states that are among the primary sources of the activity detrimental to the environment in the given issue area
This is the case with the non-participation of the United States, which accounts for 20 percent of world's greenhouse gasses emissions, in the Kyoto Protocol.[40] While

37 United Nations Environment Programme Ozone Secretariat, Findings of the Assessment Panel, ozone.unep.org/Public_Information/4Av_PublicInfo_Facts_assessment.asp.

38 Organization for Economic Co-operation and Development, *Costs saving from Non-Compliance with International Environmental Regulations in the Maritime Sector*, Report by the OECD's Maritime Transport Committee (OECD: Paris, 2003) at 4, www.oecd.org/dataoecd/4/26/2496757.pdf.

39 Crossen, 'The Compliance Continuum', *supra* note 13.

40 Energy Information Administration, *Annual Energy Review 1996* (EIA: Washington D.C., 1997); Energy Information Administration, *Emissions of Greenhouse Gases in the United States 1996* (EIA: Washington D.C., 1997).

the Kyoto Protocol may be effective in its authoritative role across states parties, its true effectiveness will solely be conveyed after the time limits for the completion of the targets set thereunder expire, and the impacts of US non-participation can be comparatively assessed.

Absence of effective non-compliance mechanisms

Most MEAs do not establish non-compliance mechanisms[41] but even when they do, diplomatic means dominate as the preferred method of exerting compliance from states parties. Sanctions and the invocation of the responsibility of a defaulting state are rarely employed, if ever. The lack of a tradition of litigation among states in the sphere of international environmental law can generally be attributed to the high costs associated with international adjudication, as well as the resolve of states to settle disputes principally through diplomacy. Moreover, the proliferation of international courts and tribunals towards the end of the 20th Century[42] was followed by treaty parallelism and concurring jurisdiction of various dispute resolution procedures. Therefore the availability of the rich institutional and procedural infrastructure for the invocation of state responsibility repelled rather than attracted states to adjudication.

Prolonging international legal response

Comprehensive MEAs are not solely difficult to achieve with regard to an adequate overarching scope, but are also often not the timely solution to the environmental issues that they address. Their legally binding character inevitably prolongs the negotiations of an international environmental instrument or even ultimately prevents it from being ratified and coming into force. For instance, the minimum period for a treaty's metamorphosis from adoption to entering into force for IMO conventions on marine pollution ranges between 5-8 years.[43] To this one may add at least 2-5 years for the negotiation process itself. These delays in ratification are often attributable to slow domestic administrative procedures which can be the result of a change in diplomatic representatives responsible for a particular treaty, or because a more pressing issue has taken priority in the relevant government department. However, the said delays may also be the result of external pressures by other powerful non-signatory states, various domestic or transnational lobby groups, public polls or the media. Moreover, states often wait for one another to ratify a treaty, carefully choosing the timeframe for it to come into force. Smaller

41 F. Francioni, 'Dispute Avoidance in International Environmental Law', in A. Kiss, D. Shelton and Kanami Ishibashi (eds.), *Economic Globalization and Compliance with International Environmental Agreements* (Kluwer Law International: The Hague, New York, 2003) 231-243.

42 Over the last two decades, 16 courts, both global and regional, have been established across the world. See C. Romano, 'The proliferation of international judicial bodies' 32 *New York University Journal of International Law and Policy* (1999) 709-749.

43 See K.R. Fuglesang, The International Association of Independent Tanker Owners (INTERTANKO), *The Need for Speedier Ratification of International Conventions,* www.oecd.org/document/37/0,2340,en_2649_34367_33943141_1_1_1_1,00.html.

states often rely on the guidance of strong states. In most cases, political bargaining between states on different common multilateral and bilateral issues is always the final judge of the success or failure of any treaty regime.

Not engaging targeted non-state entities likely to be effected by the treaty regime
The traditional conception of international environmental law-making focusing on states and their relations has evolved to acknowledge the many local, domestic and regional non-state stakeholders as being decisive elements of a treaty's effectiveness.[44] These non-state actors may include different lobby groups from the global, regional and domestic levels, public polling, domestic market prognosis of economic growth and changes in political power in the participating states.[45] This non-legal machinery is central in shaping a MEA in the first place, and it may prolong or disable its implementation and successful enforcement. It is therefore pertinent to consult the various stakeholders, especially those targeted by a treaty, all throughout a treaty's life-cycle.

Regional legally binding MEAs

One cannot overlook the relevance of regional regulation as a form of international environmental treaty-making. Regional instruments have emerged as a potential alternative to global environmental regimes since states agree easier on environmental matters when they have a vested interest in the protection of a particular region, for example, rather than when a matter has global effects not noticed in a certain region. The many regional seas conventions in place at the moment attest to this.[46] Compared to global measures, these regional instruments are more easily agreed upon in a legally binding form, and they often incorporate instruments of liability that are seldom found in legally binding global MEAs. A regional hard law MEA is more likely to be effective across its states parties and in view of the environmental targets that it sets than a global one. The difficulties in regionally developing environmental rules relate to the fact that environmental issues are predominately interlinked and go beyond particular regions; often not all states that are the sources of regional environmental concerns are bound by regional regimes. An example of this are ships sailing in a region subject to a regional treaty regime, without having to abide by the rules of the regime as a result of them flying the flag of third countries and/or flags of convenience (FOC) countries.

44 See the new institutionalism doctrine in D. Victor, K. Raustiala, and E.B. Skolnikoff (eds.), *The Implementation and Effectiveness of International Environmental Commitments: Theory and Practice* (MIT Press: Cambridge, Massachusetts, 1998). Also see O.R. Young, 'Inferences and Indices: Evaluating the Effectiveness of International Environmental Regimes', 1 *Global Environmental Politics* (2001) 99.

45 The term participating states is used in this paper to convey any category of state involvement in the international law-making process, whether as a negotiating or signatory state or a state party.

46 For more information on the UNEP Regional Seas Programme, see www.unep.org/regionalseas/About/default.asp.

International soft law

Soft international instruments are not hindered by issues intrinsic to a legally binding format. Specifically, some of the advantages of developing soft international norms instead of mandatory ones include the following: i) it is easier to reach global accord since states have complete control over the type and level of commitment assumed under a soft law instrument; ii) there are less delays in negotiations compared with legally binding MEAs; iii) it is easier to fulfil principles and targets set in soft law since states are allowed to adopt a more customized approach to the choice of instruments for incorporating norms in domestic regimes and for their enforcement; iv) soft law bridges North-South differences more successfully as it leaves more room for dialogue and alternative ways of achieving environmental goals tailored to the specific needs of participating states; v) generally there is a greater level of global interstate dialogue and focus on co-operation that furnishes legally binding environmental instruments on bilateral or regional levels; vi) soft law enables greater participation of non-state actors such as industry and NGOs.

Non-binding international norms will have a greater level of persuasiveness and hence be more effective when they are part of an IER, in particular when legally binding agreements have already been established in the same issue area or when soft law has been produced in a regional IER. One area where legally binding MEAs arguably have an advantage is in the realm of enforcement and compliance. This stems from the general presumption that soft law is not appropriate for achieving timely and concrete environmental targets since states are not compelled to obey it under threat of sanction. One needs to ask, however, how relevant the instruments of coercive enforcement and compliance for compelling obedience with international environmental norms are. The question of why nations obey international law has often been raised by legal and international relations scholars, and the answer has never been one-sided.[47]

Effectiveness through enforcement and compliance: the hard law vs. soft law dilemma

As Charney states, 'No study has determined, however, whether the rate of compliance with an international law norm is greater than that of non-legally binding international norms, 'soft' norms.'[48] The statement directly supports the notion submitted in this paper that there is little difference between soft and hard international instruments in view of their effectiveness as measured by compliance and enforcement. The connection between effectiveness and the enforcement of and

47 See H. Hongju Koh, 'Why Nations Obey International Law' 106 *Yale Law Journal* (1997) 2599. For an account of the bibliography relating to international legal compliance see W.C. Bradford, 'International Legal Compliance: An Annotated Bibliography', 30 *North Carolina Journal of International Law and Commercial Regulation* (2004) 379.

48 J.L. Charney, 'Compliance with International Soft law', in D, Shelton (ed,) *Commitment and Compliance*, *supra* note 14, 115-118 at 116.

the degree of compliance with an international instrument is self-evident. An international norm that is not enforced or complied with has failed. Effectiveness in achieving environmental goals as well as effectiveness as measured by compliance is attained through processes originating predominately from the realm of internal relations and external to international law; the role of coercive enforcement instruments is of subsidiary relevance in compelling obedience with international norms. Namely, states rarely and reluctantly resort to methods such as dispute resolution procedures, invocation of state responsibility, or trade and other sanctions, to compel obedience from defiant states. While the threat of sanctions may be an incentive for a state to act in line with an international instrument, this cannot be the primary means for exerting obedience. From the perspective of legal theory, Koh reasons that 'voluntary obedience, not forced compliance, must be the preferred enforcement mechanism.'[49] One must note that the basis of legally as well as non-legally binding agreements is an accord across the appropriate number of states. It is the processes that lead to this international accord, and those following from it, that offer the most effective instruments for ensuring compliance therewith. As a general rule, Kiss emphases that 'states that have voluntarily negotiated, drafted, and adopted an international instrument comply with the agreement which is the final product of their efforts.'[50]

What then are the alternative instruments that exert compliance with international norms but do not involve coercive enforcement? Some of the means of compelling obedience as viewed by A. Chayes and A.H Chayes as well as by Franck, include the following:

> If Nations must regularly justify their actions to treaty partners […] they are more likely to obey it.[51]
>
> If nations internally "perceive" a rule to be fair […] they are more likely to obey it [52]

Therefore, two of the primary instruments for enforcement of international law include using pressure from other participating states in the same MEA or IER, and effective incorporation of an international instrument into domestic regimes as a process of legitimizing international norms. For the former, there are many ways in which a participating state may instigate ratification from another state, and later compel obedience with a legally binding agreement or soft law norm. Pressure can be exerted through political bargaining by a system of concessions

49 Koh, 'Why Nations Obey', *supra* note 47, at 2645.

50 A. Kiss, 'Commentary and Conclusions', *supra* note 34, at 242.

51 A. Chayes and A. H. Chayes, *The New Sovereignty: Compliance with International Regulatory Agreements* (Harvard University Press: Cambridge Massachusetts, 1995), cited in Koh,, 'Why Nations Obey', *supra* note 47, at 2645.

52 T.M. Franck, *The power of Legitimacy Among Nations* (Oxford University Press, 1990), cited in Koh, 'Why Nations Obey', *supra* note 47, at 2645.

and reprisals in various areas of interstate co-operation, especially in trade issues. This technique is particularly popular among the countries of the industrialized North.

As for the internalization of MEAs, effective implementation of a treaty or the incorporation of soft law principles into domestic law requires establishing linkages between various elements of the domestic system, each of which may hinder the success and speed of implementation. This includes the judiciary, public prosecutors, the police and customs officers, the justice department, the media, industry and other actors that are likely to be affected by the new regulations. Another element of the effective internalization of international rules is the development of domestic liability and redress regimes that deter non-compliance of non-state actors targeted by the international instrument. In general, there exists a consensus among scholars that effective integration of international law into domestic systems is among the primary instigators of compliant behaviour.[53]

Additionally, Chayes and Chayes include the following in the list of potential non-forceful mechanisms for compelling obedience: transparency; reporting and data collection; verification and monitoring; dispute settlement; capacity-building; and strategic review and assessment.[54] One may also add that monitoring should be performed by impartial observes in the form of either NGOs or IGOs.[55] Furthermore, one must also acknowledge that compliance by both targeted states and non-state targeted actors will depend on the cost effectiveness ratio. As the OECD report illustrated in view of international regulation of marine pollution, it remains cheaper to pollute the marine environment than to comply with strict environmental standards. If the disobedient targeted non-state actor is also a powerful lobby group in one of the participating states, it is likely that the state in question will allow such disobedience and hence be itself in violation of the international instrument.[56]

Finally, the responsiveness of the international instrument to the differences between the developed North and the developing South also counts towards its effectiveness, in particular in view of the difficulties that the South faces in en-

53 Giraud-Kinley notes that 'the effectiveness of international law […] is ultimately measured according to its enforcement at the local level.' See C. Giraud-Kinley, 'The Effectiveness of International Law: Sustainable Development in the South Pacific Region', 12 *Georgetown International Environmental Law Review* (1999) 125-176 at 170. Similarly, Koh emphasizes that the key element in obedience of international regimes is their reaffirmation in the form of an 'internally binding domestic legal obligation' through processes such as judicial description, legislative embodiment, or executive acceptance. See Koh,, 'Why Nations Obey', *supra* note 47, at 2659. See also R. Fisher, *Improving Compliance with International law* (University of Virginia Press: Charlottesville, 1981).

54 See A. Chayes and A. H. Chayes, *The New Sovereignty*, *supra* note 51, cited in Koh, 'Why Nations Obey', *supra* note 47, at 2637.

55 Kiss, 'Commentary and Conclusions', *supra* note 34, at 240.

56 See OECD, *Costs saving from Non-Compliance*, *supra* note 38.

forcement, compliance and even negotiating an MEA. Specifically, developing countries and countries with economies in transition often sign or adhere to treaties without having the right domestic infrastructure or the know-how to implement and enforce them. In this case again, enforcement is not exerted forcefully but through financial and technical support by the North to the South with the objective of strengthening the latter's regulatory and institutional capacity. This is done through legal and technical assistance, training and promotion of education in environmental law matters and environmental law information. The difficulty underpinning the current environmental discourse is the on-going North-South debate in which the industrialized North advocates stringent environmental protection and resource management at the expense of economic growth, while the developing South is cautious in adhering to ambitious environmental rules that may impede upon their economic development. In recognition of these fundamental differences, the principle of common but differentiated responsibility emerged, which includes the commitment on the part of the industrialized North to help the implementation and enforcement of international environmental instruments in the South.[57] All of the above enforcement and compliance mechanisms are already widely employed both with regard to soft and hard international law.

The availability of hard law instruments of enforcement as the final resort for compelling obedience from defiant states is unquestionably significant, and these instruments should be instituted wherever possible. On the other hand, the same type of stronger instruments are to an extent already available for exerting compliance with soft law norms, in particular if they originate from legitimate international organizations such as the UN, IERs such as the ATS, or even from individual states' policies. One can take as an example the UN resolutions imposing a complete ban of high seas driftnet fishing leading the United States, as an advocate of this ban, to secure compliance by threatening trade sanctions against uncooperative states.[58] What is more, the issues commonly invoked as impeding upon soft law compliance may also hinder obedience with hard law. This concerns the question of whether legal obligations are conveyed clearly rather than in a general and residual manner and whether international norms can be transmitted into the domestic realm.

Most importantly, it is argued that it is interstate co-operation, efforts in preserving and achieving international accord and ultimately diplomatic means of pressure that hold the key to compliance with MEAs whether of hard law or soft law character. Therefore, soft law is not per se less effective than hard law in tackling environmental issues. Its lack of legally binding character transforms into ineffectiveness solely when it is not accompanied by adequate compliance machinery.

57 See Principle 7, Rio Declaration.

58 See discussion in D.R. Rothwell, 'The General Assembly Ban on Driftnet Fishing', in D. Shelton (ed.), Commitment and Compliance, *supra* note 14, at 135.

This may either be intrinsic to the IER that the soft law is a part of, to the body that facilitated its negotiations or it can also be established separately.

Making the right choice for forests

It is submitted that legally binding MEAs should continue to be developed as a primary instrument of international environmental governance. Soft law should in principle be used as a subsidiary means for harmonizing differing state behaviour and for setting progressive targets. This will advance environmental governance either through resort once again to soft law or by creating the right climate for the negotiations of a legally binding agreement. Nevertheless, negotiations of a legally binding MEA should only be pressed for when widespread support and comprehensive commitments can be secured in the hard law format, and when there are no doubts concerning compliance. In certain instances, such as in the development of an international agreement on forests, it must be recognized that choosing a legally binding format may permanently halt negotiations. In the case of an international agreement on forests, it seems that the targets placed on the negotiating table were unrealistic and did not convey the established behaviour either in the domestic regimes of negotiating states or in the international domain.[59] When reminded of the common legal progression of international environmental treaty law to embrace a framework convention – protocol formula, it would seem counterintuitive to try to reach consensus on concrete stringent targets already at the initial stages of negotiations. In the first legally binding agreement in a specific issue area, hard law instruments rarely go beyond the framework contents. Furthermore, contrary to some environmental issues such as pollution of areas beyond national jurisdiction, forest degradation does not have an immediately apparent level of urgency that would justify compromising state self-interest and adherence to a legally binding agreement; negotiating states are not under pressure from domestic or international media or public opinion to negotiate or adhere to such a treaty.

All this considered, and in light of the five years of unsuccessful negotiations on an agreement on forests, the option of a legally binding environmental instrument related to forests could be realized in a framework and residual hard law format. Such a framework treaty could then serve as the basis for developing a protocol with concrete targets for deforestation negotiated in the second stage. Alternatively, states could look to a soft law option. The discussion thus far has illustrated that soft international instruments, when accompanied by supervisory organs for overseeing compliance with them, offer a viable alternative to legally binding MEAs and may be just as effective in both exerting obedience with stringent environmental norms as well as in having an impact on the respective

59 For more information on the proposals for an international agreement on forests, see www.un.org/esa/forests/.

environmental issue. Several soft law international instruments specifically related to forests are already available: the 1992 Forest Principles[60] and Chapter 11 of *Agenda 21*.[61] However, neither of them is presently accompanied by effective enforcement and non-compliance mechanisms.

Fragmentation of International Environmental Law: Overcoming Institutional Chaos

MEAs, and IER's in particular, are supplemented by various types of institutional arrangements that facilitate further development of treaty regimes and also supervise their implementation and enforcement. While such institutional underpinning is characteristic of international hard law and involves the establishment of separate IGOs or secretariats within existing IGOs,[62] today MEAs are dominated by what Churchill and Ulfstein refer to as 'autonomous institutional arrangements.'[63] Autonomous institutional arrangements include Conferences of the Parties (COP) or Meetings of the Parties (MOP) which have legislative and decision-making powers; they may also comprise a secretariat, and a number of other bodies such as technical and scientific liaison and expert groups. Soft international instruments can also enjoy such institutional support, in particular when negotiated by one of the institutions that also prescribes international hard law.

The end result is a "forest" of different secretariats, IGOs, COPs and MOPs that are predominately un-coordinated. Ghering rightfully notes that international environmental regimes have 'develop[ed] into comparatively autonomous sectoral legal systems.'[64] Some linkages do exist on the scientific level between different international instruments and their underpinning institutions. For example, the Liaison group on the biodiversity related conventions was created to enhance co-operation and maximize the utility of the treaty regimes in protecting biodiversity.[65] Other synergies refer to the many Memoranda of Understanding (MOU) between

60 Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. III), www.un.org/documents/ga/conf151/aconf15126-3annex3.htm.

61 Chapter 11, Combating Deforestation, *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

62 IMO is the host institution for MARPOL and a long list of other international conventions related to marine pollution; International Oil Pollution Funds (IOPC Funds) administers the 1992 Liability and Fund Conventions; International Whaling Commission.

63 R.R. Churchill and G. Ulfstein, 'Autonomous Institutional Arrangements in Multilateral Environmental Agreements: A little-noticed phenomenon in international law', 94 *American Journal of International Law* (2000) 623.

64 T. Gehring, 'International Environmental Regimes: Dynamic sectoral legal systems', 1 *Yearbook of International Environmental Law* (1990) 1, at 3.

65 See Report of the Fourth Meeting of the Liaison Group of the Biodiversity-Related Conventions, Bonn, Germany, 4 October 2005, www.biodiv.org/cooperation/blg-4-rep-final-en.doc.

various environmental agencies such as UNEP and IUCN, between different MEA secretariats, as well as between different IERs themselves.[66]

Still, MEAs continue to hold separate institutional arrangements despite the recognized need for institutional clean up. Looking at the different conventions related to biodiversity, the Convention on Biological Diversity (CBD), CITES,[67] the Convention on Migratory Species (CMS)[68] and the Ramsar Convention[69] have their own secretariats, whereas the World Heritage Convention[70] has the equivalent institution in the form of the World Heritage Committee, which functions under the auspices of the World Heritage Centre within the United Nations Educational, Scientific and Cultural Organization (UNESCO). All of these hold separate COPs, they are all supplemented by additional bodies such as the CITES and CMS Standing Committees and the Ramsar Convention's Bureau, and they have all established a vast range of scientific committees.

This lack of co-ordination between independent institutional arrangements inevitably detracts from the effectiveness of the treaty or international regime that they support. Reasons for this include the following: lack of co-ordination hinders information exchange, which is particularly important between the various treaty regimes that refer to similar issue areas; inefficient use of funds allocated for capacity-building in developing countries due to unnecessary and high administrative costs related to the functioning of each separate unrelated institutional arrangement, funds that could be invested in actual target programmes; slow bureaucratic procedure; diminished transparency given the enormous number of beneficiaries in the international environmental sphere; and difficulty in ensuring active participation of states parties to the different regimes due to the number of meetings. Only from September to December 2005, some 43 meetings of various supplementary bodies of MEAs and environmental IGOs have been recorded on the UNEP website.[71] Most of these meetings are at least a week long, they are held all around the globe, and their schedules often overlap. Ultimately, institutional fragmenta-

66 See, for example, 2000 Memo of Co-operation on the Global Biodiversity Forum between IUCN and the Ramsar Convention Bureau. In 1996 the Secretariats of the Ramsar Convention and the CBD also signed a Memorandum of Co-operation.

67 Convention on International Trade in Endangered Species of Wild Flora and Fauna, Washington D.C., 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, www.cites.org/eng/disc/text.shtml

68 Convention on the Conservation of Migratory Species of Wild Animals, 23 June 1979, in force 1 November 1983, 19 *International Legal Materials* (1980), www.cms.int/documents/convtxt/cms_convtxt.htm.

69 Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 January 1971, in force 21 December 1975, 996 *United Nations Treaty Series* 245, www.ramsar.org/key_conv_e.htm

70 Convention for the Protection of the World Cultural and Natural Heritage, Paris, 16 November 1972, in force 17 December 1975, 11 *International Legal Materials* (1972) 1358, whc.unesco.org/en/175/.

71 See hq.unep.org/Calendar, as at 1 October 2005.

tion both confuses and deters states from participating in treaty regimes that appear overly complex and costly.[72]

The financial aspects of institutional fragmentation and the inefficient use of allocated funds is particularly problematic, given that each MEA must establish channels through which to finance the operation of their secretariats, capacity-building programmes and other activities.[73] UNEP recognizes that funds are predominately secured through the use of traditional mandatory and voluntary trust funds that may be established either by an MEA or separately for specialized purposes. Other examples of sources of funding include the Multilateral Fund for the Montreal Protocol (MLF), the Global Environment Facility (GEF) and the Kyoto Protocol climate-related mechanisms.[74]

It is clear that synergies between various MEAs and IERs must go beyond co-operation on the scientific level, and ought to involve simplifying the existing institutional arrangements and creating solid institutional linkages between different treaty regimes, thus avoiding and resolving potential overlap between them.[75] UNEP was the first step in ensuring effective global governance through institutional integration. Established following the 1972 Stockholm Declaration,[76] UNEP was confirmed in the 1997 Nairobi Declaration as the 'leading global environmental authority that sets the global environmental agenda.' For example, UNEP presently facilitates 17 MEA secretariats, and has numerous programmes for improving what it calls the four Cs: Co-ordination, Coherence, Compliance and Capacity-building in relation to the MEAs.[77] Another step in institutional unification was the creation of the Global Ministerial Environment Forum (GMEF) in 1999, which gathers environment ministers in an attempt to provide a harmonized global environmental policy that can be implemented on the domestic level. GMEF also addresses ways of enhancing the role of UNEP.[78]

72 Gehring also warns that in the present institutional arrangements the technical aspects of implementation and legislative and political authority, such as treaty-making powers, are not separated. See T. Ghering, 'International Environmental Regimes', *supra* note 64 at 2.

73 UNEP, *Multilateral Environmental Agreements*, *supra* note 2.

74 *Ibid.* The report also identifies the World Bank, Regional Development Banks, bilateral arrangements with donor countries, foundations such as the UN Foundation, private sector donors, and NGOs.

75 See United Nations Environment Programme, 'Proposal for a Systematic Approach to Coordination of Multilateral Environmental Agreements', UNEP Doc. No.4/Rev.1, Third Consultative Meeting of the MEA Secretariats on International Environmental Governance (27 June 2001).

76 For a more detailed account of the birth of UNEP, see the paper by Donald Kaniaru in the present Review.

77 See UNEP Proposal, in UNEP, *Multilateral Environmental Agreements*, *supra* note 2 at 1.

78 Report of the Secretary General on Environment and Human Settlements, GA Res. 53/242, 10 August 1999.

Furthermore, the need for integration of the international mechanisms for financing capacity-building in the South was partly met by the establishment of GEF in 1991.[79] It provides funding for programmes and projects related to biodiversity, climate change, international waters, land degradation, the ozone layer and persistent organic pollutants.[80] Nonetheless, the MEAs related to the six environmental areas covered by GEF continue with their own independent institutional machinery for all other matters. What is more, GEF funds can be administered through projects implemented by UNEP, the United Nations Development Programme (UNDP) or the World Bank. Even in this sense, difficulties can be caused by overlap and competition between these three organizations regarding the allocation of GEF projects.

Considering all this, an overarching reform in the institutional arrangements for the enforcement and further development of international environmental law is warranted. Some of the means by which to overcome the present-day piecemeal approach in international environmental governance and to achieve greater institutional coherence include: i) establishing GEF as the central international environmental financial mechanism to assist implementation of MEAs and global environmental policies; ii) strengthening the role of UNEP, in particular UNEPs Governing Council and GMEF as the key co-ordinating bodies between the different MEAs and IERs, providing a permanent forum for dialogue between the different treaty regimes; and iii) creating an independent World Environment Organization that could adopt UNEP as its nucleus and incorporate the facilities provided by other existing IGOs.

Conclusions

This paper has illustrated that there exists no uniform one-fits-all solution in developing effective international instruments of global environmental governance. While legally binding MEAs should remain the primary option given their back-up system of enforcement measures and non-compliance regimes, it has been proven that the availability of such mechanisms is not a guarantee of favourable and notable environmental change or of effectiveness. Global, comprehensive and legally binding instruments should be developed only when the negotiating states are truly capable of implementing the adopted measures in their domestic law, as well as solely when parties are confident that they can exert compliance. On the other hand, soft law can also create commitments for the participating states and can be effective in inducing environmental change. The many advantages of soft

79 For a more detailed account of GEF and its role in financing international environmental regimes, see the paper by Ahmed Djoghlaf in the present Review.

80 J. Helland-Hansen, 'The Global Environment Facility', 3 International Environmental Affairs (1991) 137.

law are based on the fact that it is not incompatible with an international order grounded in the principle of national sovereignty – an intrinsic clash when dealing with legally binding agreements. As such, international soft law can be both an alternative and/or a supplement to legally binding international agreements.

Additionally, the problem of institutional fragmentation in global environmental governance is an issue that will continue to require consideration given that it causes notable delays and financial expense in the functioning of MEAs and IERs. These could be avoided by developing greater synergies between the existing regimes as well as by attributing greater authority to one central agency, be it the existing UNEP or an entirely new one. In sum, effective international environmental governance is best achieved through the functioning of international environmental regimes incorporating both soft and hard law instruments, rather than singular legally binding MEAs. It is further necessary to provide uniform, simplified and effective institutional arrangements for the financing of the activities of IERs, facilitating their implementation and enforcement, as well as bridging North-South differences. In essence, 'a new international environmental governance structure would have to be not only visionary and ambitious, but also pragmatic and modest.'[81]

81 Churchill and Ulfstein, 'Autonomous Institutional Arrangements, *supra* note 63 at 623.

Cross-cutting Issues in Compliance with and Enforcement of Multilateral Environmental Agreements[1]

Elizabeth Maruma Mrema[2]

Introduction

The implementation, compliance and enforcement of multilateral environmental agreements (MEAs) have become the most current contemporary issue of discussion in debates related to international environmental law. Concerns and questions are also put forward on whether it is still useful for governments to continue to negotiate, develop and adopt new environmental instruments while knowing well they will not be effectively implemented or enforced. However, with new scientific findings and certainties concerning environmental challenges, it is becoming difficult to put a halt to the development of new instruments. Consequently, more efforts need to be put in place to ensure that existing environmental instruments are effectively implemented to match the pace of the development of new MEAs. Several mechanisms are currently in place and others are under discussion to assist states parties to MEAs to play a better and more effective role in the implementation, compliance and enforcement of MEAs. That role includes reducing the heavy burden placed upon parties to implement MEAs through grouping cross-cutting issues and clustering MEAs together. This paper discusses some of these measures including the role played by UNEP in working with parties and partners to support MEA implementation through cross-cutting issues and/or clustering.

1 This paper is based on a lecture given by the author on 22 August 2005. The views expressed are the author's own and do not necessarily reflect UNEP's position.

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Why the Current Focus on Promoting Compliance with MEAs?

International environmental law, though one of the youngest and newest disciplines in the field of international law, has grown and continues to grow at a tremendous speed. The last three decades have seen a rapid development of MEAs both at global and regional levels. The exact number of existing MEAs remains uncertain, but literature on the subject estimates the number to range between 250 and 700. The fact, therefore, remains that too many MEAs have been negotiated and adopted and are in force today. The impact and effect of this development is that a number of MEAs duplicate or overlap each other in several aspects, including with regard to principles, norms and institutional arrangements for their implementation, follow-up, reporting and co-ordination. As a result there is a lack of coherence, inadequate implementation and inefficiency and ineffectiveness in implementation, synergies and interlinkages at national, regional and international levels.

Although the growing number of MEAs can be seen as a positive development, it has also had a negative impact on the implementation of the international environmental laws that have been developed. While a large number of MEAs have been developed over the years, their implementation, compliance and enforcement continues to be weak and inadequate. The international community and developing countries in particular are becoming wary of the increasing burden and responsibilities bestowed upon them to effectively implement and enforce the MEAs to which they are parties. In many cases, there is weak or inadequate national capacity to guarantee the required and effective implementation of MEAs. This realization has resulted in the recent shift from the development of more MEAs to ensuring and promoting compliance with and enforcement of existing international norms and policies. The World Summit on Sustainable Development (WSSD) underscored in the *Johannesburg Plan of Implementation*[3] the importance of the international community's task to advance and enhance the implementation of agreed international norms and policies as well as to monitor and foster compliance with environmental principles and international agreements.

The weak or inadequate implementation of MEAs does not mean that parties wilfully choose not to comply with their obligations set under different MEAs. States generally tend to comply with treaties they have explicitly committed to. Nonetheless, factors beyond their control sometimes necessitate breaches or non-compliance with their MEA obligations. Lack of or inadequate capacity to implement MEA obligations are often due to limited financial, human and technical

3 World Summit on Sustainable Development, *Johannesburg Plan of Implementation*, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm.

resources and/or lack of environmental awareness among decision-makers, i.e. parliamentarians, enforcement agents, i.e. judges/magistrates, prosecutors, police, customs officials, etc., and among citizens and the general public. Lack of or inadequate intent by the public sector for fear of investors shunning a country with strict environmental regulations, a private sector willing to take environmental risks or simply the environment being considered a secondary issue in a country's development plans are other factors limiting effective enforcement of MEAs. Notwithstanding these and other challenges, MEA secretariats, parties through Conferences of the Parties (COPs) and other partners have instituted measures to promote better and more effective compliance with MEAs and continue to do so. These measures or mechanisms are discussed and illustrated below.

Existing Measures to Promote Compliance with MEAs

Two major kinds of measures or mechanisms exist to facilitate or force a non-compliant state to fulfil its obligations under an MEA.[4] These are diplomatic and/or management measures which place emphasis on preventive measures and therefore, apply the precautionary principle, and coercive and/or enforcement measures which are accusatory and focus on forceful or punitive measures to ensure that treaty obligations are enforced. The former measures underline amicable procedures, consultations and problem-solving in a co-operative atmosphere intended to bring a non-compliant party into compliance. The latter, on the other hand, are punitive in nature and focus on differences and disagreements with a possibility to use force as the last resort to induce compliance with MEA obligations.

Diplomatic/Management measures

As noted above, states tend to wilfully comply with the MEAs they have explicitly committed, to but breaches or non-compliance do occur due to reasons beyond their control such as lack of or inadequate financial, human, technical and institutional capacity to fulfil their obligations. Consequently, diplomatic and/or management measures are some of the facilitative approach mechanisms undertaken or instituted to assist and facilitate countries to create the necessary and prerequisite capacity to comply with their international commitments. Such facilitation and assistance may, in fact, encourage greater participation in a MEA regime since emphasis is on ex ante prevention of environmental harm rather than ex post enforcement to compensate or punish for such harm. Consequently, diplomatic and/

4 The two categories described in this part are largely taken from Tuula Kolari, *Promoting Compliance with International Environmental Agreements – A Multidisciplinary Approach* (University of Joensuu, 2004) at 41-106.

or management measures in practice underline the Rio Declaration[5] principles of prevention and precaution. These principles are executed, as will be illustrated below, through reporting requirements imposed on parties, compliance monitoring, technical and scientific assistance, financial incentives, and issue-linkage or clustering of MEA themes or areas of co-operation, to mention but a few.

Reporting requirements imposed on parties

Virtually most MEAs, if not all, impose an obligation and duty upon parties to prepare, produce and submit periodic national reports to the respective COPs, through the specific MEA secretariat, on how the MEA has been put into force and implemented nationally. These reports enable parties to assess how effectively an MEA is implemented and enforced. The detail of the information required in the national reports and the timing of preparing and submitting such reports differs with each MEA.[6] Such reporting requirements serve as conflict avoidance measures that permit parties to examine and assess the extent to which states are committed to their obligations. They also serve to target assistance towards parties that are most in need of it to bring them into compliance. Reporting requirements under MEAs can also take the form of parties' self-reporting measures, failure with which to comply may result in negative impacts, such as trade sanctions under CITES, for example. They may also create positive impacts and trigger assistance and support where a party lacks the capacity or financial and human resources to compile the information and prepare the required reports. For most MEAs, national reports are prepared and submitted by states parties to the respective MEAs.

Compliance monitoring

The establishment of different types of committees or treaty bodies by MEAs themselves, or by COPs that meet regularly, normally serve as compliance control mechanisms. These bodies are not entrusted with power to impose sanctions against non-compliant parties, but can make recommendations on how such parties can be assisted to comply or on whether to undertake investigations surrounding alleged or detected breaches. On site inspections or monitoring to independently detect violations or non-compliance is a rare mechanism in international environmental agreements. It is, however, commonly used in international disarmament

5 Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

6 See, for example, Article 7, Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, in force 1 January 1989, 26 *International Legal Materials* (1987) 154, www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf (hereinafter Montreal Protocol); Article 12, United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf (hereinafter UNFCCC); Article 15, Stockholm Convention on Persistent Organic Pollutants, Stockholm, 22 May 2001, in force 17 May 2004, 40 *International Legal Materials* (2001) 532, www.pops.int/ (hereinafter Stockholm Convention).

agreements. Very few MEAs provide for strong in-country inspection and it can be considered quite an exception. It is found, for instance, in the 1988 Convention on the Regulation of Antarctic Mineral Resources Activities which, unsurprising, is not yet in force.[7] The 1991 Protocol on Environmental Protection to the Antarctic Treaty equally provides for inspection to ensure compliance with the Protocol.[8] The Ramsar Wetlands Convention[9] has also relied on on-site inspections. Parties to CITES[10] may at times be requested to invite the secretariat for on-site visits to discuss difficulties faced by a party in the implementation of the treaty. When no such invitation is received and the secretariat is not satisfied with a party's compliance by a certain date, imposing trade restrictions may be threatened as a result.[11]

Positive economic measures

For most parties from developing countries and countries with economies in transition, economic measures are the major incentive to implement and enforce their MEA obligations. Without such measures, implementation of MEAs would be even weaker and more inadequate than it is currently. These measures have thus been used as a mechanism to promote compliance with and enforcement of MEAs and they have also been used as a pre-condition for countries to ratify or accede to a particular MEA. Some of the common positive economic measures currently used to induce compliance are either stipulated in the MEA texts themselves and elaborated in specific COP decisions or are set up specifically through such decisions. These include use of financial incentives[12] or economic instruments; techni-

7 Convention on the Regulation of Antarctic Mineral Resource Activities, Wellington, 2 June 1988, not yet in force, 27 *International Legal Materials* (1988) 868.

8 Article 14, Protocol on Environmental Protection to the Antarctic Treaty, Madrid, 4 October 1991, in force 14 January 1998, 30 *International Legal Materials* (1991) 1461, www.ats.aq/protocol.php.

9 Convention on Wetlands of International Importance especially as Waterfowl Habitat, Ramsar, 2 January 1971, in force 21 December 1975, 996 *United Nations Treaty Series* 245, www.ramsar.org/key_conv_e.htm (hereinafter Ramsar Convention).

10 Convention on International Trade in Endangered Species of Wild Flora and Fauna, Washington D.C., 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, www.cites.org/eng/disc/text.shtml (hereinafter CITES).

11 Article XIII(2), CITES.

12 Some MEAs specifically name the Global Environment Facility (GEF) as their financial mechanism. This designation can be found, for example, in the following: Article 20, Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, www.biodiv.org/doc/legal/cbd-en.pdf (hereinafter CBD); Article 28, Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal, 29 January 2000, in force 11 September 2003, www.biodiv.org/doc/legal/cartagena-protocol-en.pdf (hereinafter Cartagena Protocol); Articles 10 and 13, Montreal Protocol; Article 11, UNFCCC. Other MEAs have set up their own funding mechanisms. Examples include the Multilateral Fund under the Montreal Protocol; the Trust Fund (contributions from Parties) under CITES; the World Heritage Fund under Article 15 of the Convention for the Protection of the World Cultural and Natural Heritage, Paris, 16 November 1972, in force 17 December 1975, 11 *International Legal Materials* (1972) 1358, whc.unesco.org/en/175/; the Ramsar Convention's Small Grants Fund (see www.ramsar.org/sgf/key_sgf_index.htm).

cal and scientific assistance;[13] transfer of technology, information and know how[14] either through the principle of shared and/or common but differentiated responsibilities[15]or special funding mechanisms;[16] and support for capacity-building[17] and/or enhancement, which includes training, environmental public awareness and education,[18] particularly among targeted groups, such as customs officials, the judiciary, lawyers, NGOs, etc., as well as empowerment of relevant stakeholders for enhancing enforcement capabilities.

Issue-linkage where co-operation is encouraged

Linking negotiation and/or implementation of MEAs could also be considered a positive inducement for countries to join an international agreement or to better implement existing MEAs. For instance, most if not all developing countries participated at the 1992 UN Conference on Environment and Development as well as supported its outcomes – the Rio Declaration and *Agenda 21*[19] – because development was linked to environment. Linking environment with international trade,

13 See Article 14, Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, in force 24 May 1992, 28 *International Legal Materials* (1989) 657, www.basel.int/text/con-e.htm (hereinafter Basel Convention); Article 16, Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam, 11 September 1998, in force 24 February 2004, 38 *International Legal Materials* (1999) 1, www.pic.int/en/ViewPage.asp?id=104 (hereinafter Rotterdam Convention); Articles 12 and 13, Stockholm Convention.

14 See Article 16, CBD; Article 22, Cartagena Protocol; Article 18, United Nations Convention to Combat Desertification in those Countries Experiencing Serious Drought and/or Desertification, particularly in Africa, Paris, 17 June 1994, in force 26 December 1996, 33 *International Legal Materials* (1994) 1309, www.unccd.int/convention/menu.php (hereinafter UNCCD); Article 10A, Montreal Protocol; Article 4(3, 7-9), UNFCCC; Article 10, 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, unfccc.int/resource/docs/convkp/kpeng.pdf (hereinafter Kyoto Protocol); Article 10(d), Basel Convention; Article 16, Rotterdam Convention; Article 12, Stockholm Convention.

15 See Article 5(5), Montreal Protocol; Article 20(4), CBD; Article 4(4), UNFCCC.

16 Although most MEAs establish financial mechanisms which raise funds from the contributions of the parties through Trust Funds, Article 21, CBD and Decision III/8, Memorandum of understanding between the Conference of the Parties to the Convention on Biological Diversity and the Council of the Global Environment Facility, www.biodiv.org/decisions/default.aspx?m=cop-03, as well as Article 11, UNFCCC and Decision 12/CP.2, Memorandum of Understanding between the Conference of the Parties and the Council of the Global Environment Facility, unfccc.int/resource/docs/cop2/15a01.pdf#page=55, set up and benefit from the Global Environment Facility (GEF) funding mechanism. Article 10(1), Montreal Protocol establishes a unique Multilateral Fund as well as establishing GEF as a funding mechanism to assist its parties to comply with the Ozone Convention and Protocol. Other examples of Conventions which benefit from GEF funding include UNCCD and the Stockholm Convention.

17 See Article 12(a), CBD; Article 22, Cartagena Protocol; Article 19(1-2), UNCCD; Article 10, Montreal Protocol; Article 9(2)(d), UNFCCC; Article 10(e), Kyoto Protocol; Article 11(1)(c) and 16, Rotterdam Convention; Article 12, Stockholm Convention.

18 See Article 13, CBD; Article 13, Cartagena Protocol; Article 19, UNCCD; Article 9(2), Montreal Protocol; Article 6, UNFCCC; Article 10(e), Kyoto Protocol; Article 10(4), Basel Convention; Article 10, Stockholm Convention.

19 *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

international debt or research and development tends to induce countries to be more interested in environmental issues and consequently to comply with their MEA obligations. At times, countries may be induced to join an MEA so as not to be left without the benefits gained from joining the agreement. For instance, the Montreal Protocol prohibits parties from trading ozone-depleting substances with non-parties. This means that only by becoming a party to the Protocol may a state gain access to international markets for ozone-depleting substances. Furthermore, including financial and technological transfers in MEAs could equally serve as a positive measure of compliance promotion, encouraging countries to join.

Settlement of disputes by diplomatic means

Virtually all old and new MEAs have dispute settlement provisions in them. Such provisions normally begin with a diplomatic statement of a general rule that all disputes should be settled exclusively by peaceful means. Peaceful settlement, dominant in international environmental agreements, accommodates consent, adjustment and compromise. Judicial settlement in court, which has been rarely employed in strictly environmental agreements, is the last resort in dispute settlement mechanisms. Settlement of disputes through diplomatic mechanisms involves the following measures: treaty interpretation, negotiation, third party involvement and good offices or services.

As set out in Article 31 of the Vienna Convention on the Law of Treaties[20] an organ may be assigned to give in good faith an authoritative interpretation of a treaty rule if a party claims that a breach has occurred. This mechanism permits disputes relating to treaty interpretation to be solved amicably and in a less confrontational manner than if the matter were sent to a judicial court for adjudication. However, treaty interpretation may bring the particular agreement into question and its binding force may be affected as a result, making it difficult for the treaty to achieve its intended objectives.

Negotiation is a commonly used mechanism to resolve disagreements between parties under an agreement before it becomes a dispute. It is flexible, informal, not costly, non-confrontational and non-binding, as opposed to judicial or arbitral proceedings. Once parties negotiating an agreement agree on the outcome of their negotiations, it is expected that each party will implement the agreement or decision made in good faith.

Most international agreements include in their instruments a provision for involving an independent third party, either an institutional body or another state, to intervene through negotiation to assist in finding a solution to a dispute, without

20 Vienna Convention on the Law of Treaties, Vienna, 22 May 1969, in force 27 January 1980, 1155 *United Nations Treaty Series* 331, www.un.org/law/ilc/texts/treaties.htm.

affecting the third party's own interests. Such a third party can act as a mediator and can appeal to the parties in the dispute and encourage them to find a solution by providing views and ideas as to the basis for a compromise. A mediator usually assists the parties to diagnose their problem and offers suggestions and recommendations to be considered by the parties as a possible solution to the treaty dispute.

Good offices or services are another form of third-party involvement whereby another party, state or institution may offer to act as a host for negotiations and to assist in resolving a treaty dispute. Conciliation, another form of mediation and good offices, is equally utilized as a form of third party involvement. However, unlike the other two which are informal in nature, conciliation is more semi-formal. The parties to a dispute are given an opportunity to be heard, claims and objections are examined and proposals to the parties can be made so as to reach an amicable solution to the dispute. Despite the fact that the conciliation process and procedure is more formal, time-consuming and often as expensive as a judicial settlement or arbitration, its decisions or outcomes are invariably of a non-binding and recommendatory in nature.[21]

With all the examples provided above, it is clear that the diplomatic and/or management measures in place intend to promote and induce compliance with MEAs. They are, therefore, preventive in nature and apply the principle of precaution. Consequently, the management and/or diplomatic approaches are considered preventive and precautionary mechanisms to promote and induce compliance with MEAs. The approaches offer incentives and co-operative problem-solving hence encouraging positive state relations.

Coercive/Enforcement measures

Where there is no political will on the part of a state to comply with its MEA obligations, stricter coercive and enforcement measures, which will not be discussed in great detail in this paper, have been instituted to force a party to comply. Such measures, however, are oriented toward adversarial dispute settlement mechanisms and sanctions, which are confrontational and conflict-driven. Enforcement measures widely used in international environmental agreements in the form of dispute settlement provisions include the establishment of arbitral tribunals composed of a judge or judges normally selected by the parties and whose decisions

21 See, for instance, Article 11(5), Vienna Convention for the Protection of the Ozone Layer, Vienna, 22 March 1985, in force 22 September 1988, 26 *International Legal Materials* (1987) 1529, www.unep.org/ozone/pdfs/viennaconvention2002.pdf (hereinafter Vienna Ozone Convention); Annex II, Part 2, Article 1, CBD; and Article 14(6), UNFCCC, which provide for a mandatory conciliation mechanism.

are respected as final and binding;[22] or submission of a dispute to judicial settlement in an international court.[23]

In some MEAs, coercive measures such as sanctions to induce compliance have or are being used with considerable success. Such sanctions include withholding or suspending treaty privileges until a party is back in compliance. This can be in the form of losing access to technology transfer or financial assistance or losing the right to produce, consume or trade in controlled substances[24] or species[25] or to participate in co-operative mechanisms.[26] Liberia, for instance, was subject to a brief suspension from the Montreal Protocol regime in 1998.[27] As another example, in 1996 Russia received financial assistance to phase out production and consumption of ozone-depleting substances (ODS) by introducing import and export controls on ODS and by reducing their recycling.[28]

Examples of Facilitative Mechanisms for Effective MEA Implementation

Most of the major global MEAs include specific compliance or non-compliance provisions[29] in their instruments as a response to inadequate enforcement. In this regard, a number of key MEAs have established, as appropriate, compliance (or non-compliance) committees, and/or implementation (or standing) committees, and/or have developed guidelines for implementation of their respective MEAs. For example, through the Montreal Protocol, the Ozone Convention has a well established and functioning Implementation Committee and Non-Compliance

22 See Article 11, Vienna Ozone Convention; Article 14, UNFCCC; Article XVIII, CITES.

23 See Article 11(3)(b), Vienna Ozone Convention; Article 20(3)(a), Basel Convention; Article 28(2)(b), UNCCD; Article 27(3)(b), CBD.

24 See the Montreal Protocol Implementation Mechanisms under its Implementation Committee.

25 Under CITES, trade suspensions can be recommended for certain species, a party may be banned from becoming a member of the Standing Committee or lose the right for its experts to participate in CITES permanent committees, or it may be deprived of access to meeting documents.

26 Under the Kyoto Protocol, participation in Joint Implementation, the Clean Development Mechanism and Emissions Trading can be suspended if a party does not meet eligibility criteria for the use of such mechanisms, or its future emission quota may be diminished as a result of a treaty breach.

27 See Report of the 21st Meeting of the Implementation Committee Under the Non-compliance Procedure for the Montreal Protocol, UNEP/OzL.Pro/ImpCom/21/3 (1998), paras. 12-14, ozone.unep.org/Meeting_Documents/impcom/index.asp.

28 See Report of the 19th Meeting of the Implementation Committee Under the Non-compliance Procedure for the Montreal Protocol, UNEP/OzL.Pro/ImpCom/19/3 (1997), Agenda Item 3, ozone.unep.org/Meeting_Documents/impcom/index.asp.

29 See Articles XIII and XIV(1), CITES; Article 34, Cartagena Protocol; Article 27, UNCCD; Article 8, Montreal Protocol; Article 13, UNFCCC; Article 18, Kyoto Protocol; Article 19, Basel Convention; Article 17, Rotterdam Convention; Article 17, Stockholm Convention.

Working Group.[30] Parties to the UN Framework Convention on Climate Change (UNFCCC) are developing compliance procedures and mechanisms through the Compliance Committee established under the Kyoto Protocol.[31] Similarly, parties to the Convention on Biological Diversity (CBD) are also developing procedures and mechanisms to promote compliance and address cases of non-compliance through the Compliance Committee[32] established under the Biosafety Protocol. The Convention on Long Range Transboundary Air Pollution, applying the same model of non-compliance procedure as the Montreal Protocol, has also established its own Implementation Committee[33] to review compliance with the protocols to the Convention.

Other modalities are equally used to develop mechanisms to ensure synergies between and promote compliance with MEAs. These are specific COP decisions or amendments adopted for the promotion of compliance and for remedying non-compliance and the development of specific MEA compliance guidelines. For example, alongside its regular review and analysis of parties' national laws to determine whether such laws meet its implementation requirements, through its Standing Committee CITES is developing Guidelines on Compliance with the Convention.[34] The Basel Convention is also developing Guidelines for monitoring the implementation of and compliance with obligations under the Convention[35] through its Committee[36] for administering mechanisms for promoting implemen-

30 See Article 8, Montreal Protocol and Annex II, Report of the 10th MOP, UNEP/OzL.Pro.10/9 (1998), www.unep.ch/ozone/pdf/10mop-rpt.pdf.

31 See UNFCC COP/MOP Decision 24/CP.7, Procedures and Mechanisms Relating to Compliance Under the Kyoto Protocol, unfccc.int/resource/docs/cop7/13a03.pdf.

32 See Article 34, Cartagena Protocol and Decision BS-1/7, Establishment of procedures and mechanisms on compliance under the Cartagena Protocol on Biosafety, www.biodiv.org/doc/handbook/cbd-hb-10-bs-01-en.pdf.

33 See Executive Body for the Convention on Long Range Transboundary Air Pollution, Decision 1997/2 concerning the Implementation Committee, its structure and functions and procedures for review of compliance, as amended, Annex V, Report of the 19th Session of the Executive Body, ECE/EB.AIR/75, 16 January 2002, www.unece.org/env/documents/2002/ece/eb/air/ece.eb.air.75.e.pdf.

34 See CITES, Resolution 11.3, Compliance and Enforcement, www.cites.org/eng/res/all/11/E11-03R13.pdf .

35 See www.basel.int/meetings/sbc/workdoc/techdocs.html. Pursuant to Decision II/5, Model National Legislation for the Transboundary Movement and Management of Hazardous Wastes, www.basel.int/meetings/cop/cop1-4/cop2repe.pdf, model legislation to assist parties in implementing obligations was developed and adopted. As mandated by COP-7, guidelines for the preparation of national legislation for the implementation of the Convention are being developed.

36 See Basel Convention, Decision VI/12, Establishment of a Mechanism for Promoting Implementation and Compliance, and Decision VI/13, Interim Procedure for Electing the Members of the Committee For Administering the Mechanism for Promoting Implementation and Compliance, www.basel.int/meetings/frsetmain.php?meetingId=1&sessionId=3&languagId=1.

tation and compliance. The Aarhus Convention[37] similarly has established a Compliance Committee.[38]

The support that has been given to parties by MEA secretariats through these committees or through other relevant international and regional bodies to ensure effective implementation of parties' obligations under those specific MEAs has mostly been in the form of incentives to comply. Such incentive measures include the provision of financial resources, technical assistance, technology transfer, training or awareness-raising as well as assistance in the development of implementing laws or regulations, to mention but a few. By using a carrot and stick approach, these measures are intended to assist the parties to effectively implement their MEAs obligations. The composition of such committees as well as the content and magnitude of the level of support and assistance provided to the parties differ greatly from one MEA to the other. For example, the CITES non-compliance mechanism, which is considered to be the strongest uses two types of measures. CITES offers the carrots of technical assistance and development of model national legislation[39] but also uses the stick of trade sanctions, including suspension or complete prohibition of trade against persistently non-compliant countries,[40] to induce compliance. The Basel Convention[41] and UNFCCC[42] regimes only advise, and provide non-binding recommendations as well as assistance in terms of financial resources, capacity-building and technical support to overcome compliance difficulties experienced by the parties. Non-compliance with the Montreal Protocol may not only lead to recommendations to a party from the Compliance Committee, but may also result in a party being suspended by the COP from benefiting from specific rights and privileges under the Protocol,[43] including provision of funds and trade measures. The Kyoto Protocol Compliance Committee has two regimes to assist its parties.[44] They are, namely, the Facilitative Branch which is designed to provide advice and assistance to parties, give recommendations and mobilize resources to enable the parties to comply and hence promote compliance, and the Enforcement

37 Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters, Aarhus, 25 June 1998, in force 30 October 2001, 38 *International Legal Materials* (1999) 517, www.unece.org/env/pp/documents/cep43e.pdf (hereinafter Aarhus Convention).

38 See www.unece.org/env/pp/compliance.htm. See also Article 15, Aarhus Convention and Decision I/7, Review of Compliance, www.unece.org/env/pp/mop1docum.statements.htm.

39 See United Nations Environment Programme, *Enforcement of and Compliance with MEAs: The Experiences of CITES, Montreal Protocol and Basel Convention*, (UNEP: Nairobi, 1999) vol. I, at 29-30.

40 For example, the United Arab Emirates in 1985-90, Thailand in 1991-92 and Italy in 1992-3. *Ibid.*, at 30.

41 Article 19, Basel Convention.

42 Article 13, UNFCCC.

43 Article 8, Montreal Protocol, Annex V, Report of 4th MOP, UNEP/OzL.Pro.4/15 (1992), www.unep.ch/ozone/Meeting_Documents/mop/04mop/4mop-15.e.pdf; and Annex IV, Report of 10th MOP, *supra* note 30.

44 Kyoto Protocol, Decision 5/CP.6, Bonn Agreements on the Implementation of the Buenos Aires Plan of Action, Agreement VI, www.unfccc.int/resource/docs/cop6secpart/05.pdf#page=38.

Branch, which has power to determine consequences for parties that encounter problems with meeting their commitments. In this regard, the Enforcement Branch determines non-compliance in which case a concerned party has to make up the difference in the second commitment period, plus a 30 percent penalty. In addition, a party may be barred from selling under the emissions trading programme and be required to develop a compliance action plan.[45]

UNEP's Role in Promoting Compliance with and Enforcement of MEAs[46]

In view of the parallel efforts initiated by MEA secretariats and other regional groupings it became necessary to address in a focused and co-ordinated way these efforts, providing much needed tools and approaches to negotiations. Measures were needed to ensure that developing countries and countries with economies in transition fully appreciated their overall interest in becoming party to, and having the means to implement, the different instruments. Furthermore, realizing that a number of common issues were addressed by compliance mechanisms under different MEAs necessitated the need for guidance tools. These were intended to assist parties to different MEAs to clearly understand the common and cross-cutting issues covered by different MEAs and how they could be executed in a synergistic and integrated manner at the national level, thus reducing the seemingly heavy burden on parties to implement and comply with multiple MEAs. In any case, despite the various mechanisms already in existence at the national, regional and global levels to assist parties to comply with and enforce their obligations under different MEAs, an increase in evading MEA provisions as well as national legislation implementing different MEAs can be noticed.

To further assist governments to better implement, comply with and enforce their obligations under MEAs, with the support and co-operation of governments UNEP has developed Guidelines on Compliance with and Enforcement of MEAs. These Guidelines were adopted by the Seventh Special Session of the UNEP Governing Council (GC) in February 2002[47] and are broadly available for use by governments, MEA secretariats and all those interested. When it adopted the Guidelines, the GC sought to disseminate them to governments, MEA secretariats, international or-

45 The Kyoto Protocol's Compliance Committee held its first meeting in Bonn, Germany on 1-3 March 2006 where the chairs of its two Branches were elected indicating the beginning of its operations.

46 This section is taken and updated from a paper prepared by the author on Cross-cutting Issues Related to Ensuring Compliance with MEAs, and presented at a workshop on Ensuring Compliance with MEAs: A Dialogue Between Practitioners and Academia, held in Heidelberg, Germany, on 11-13 October 2004.

47 Guidelines on compliance with and enforcement of multilateral environmental agreements, UNEP/GCSS.VII/4/Add.2 (2002), www.unep.org/GC/GCSS-VII/.

ganizations and other institutions involved in the implementation of MEAs. It also sought to promote use of the Guidelines through the UNEP programme of work, in close collaboration with states and international organizations. Thus, the GC requested UNEP to strengthen the capacity of developing countries, in particular least developed countries and countries with economies in transition to implement and enforce MEAs using, inter alia, the Guidelines.

Improving compliance, enforcement and implementation of MEAs calls for practical and tangible guidance. Furthermore, in order to strengthen the capacity of developing countries to implement and enforce MEAs and the Guidelines, in particular, UNEP is currently pursuing a three-pronged approach, pursuant to its work programme. This involves developing and refining a Manual on Compliance with and Enforcement of MEAs,[48] convening a series of regional workshops to review, test and solicit comments and input for incorporation into the Manual, [49] and conducting pilot projects or initiatives to implement the Guidelines and the Manual with practical tangible activities focusing on common and cross-cutting issues covered by various MEAs.[50]

Nature and scope of the UNEP Guidelines

The Guidelines[51] are non-binding and advisory in nature. They do not affect MEA obligations in any way. In order to be relevant to a broad range of MEAs, the Guidelines set forth a toolbox of actions, approaches and measures to strengthen the international and national implementation of MEAs. As such, they seek to inform and improve the manner in which parties implement their MEA commitments. Consequently, the selection and application of specific tools in the Guidelines to the specific context of a particular MEA will depend on the characteristics of that MEA, as well as the context of a country or countries, or organizations seeking to apply the tools.[52]

The Guidelines provide approaches to enhancing compliance, recognising that each MEA has been negotiated in a unique way and has its own independent legal status. They acknowledge that compliance mechanisms and procedures should take account of the particular characteristics of the MEA in question. Enforcement

48 For the text of the Draft Manual (as of November 2004) in English, French and Spanish, see www.unep.org/DEPI/programmes/law_implementation.html. The final Manual is forthcoming (in May 2006), and will be available on the UNEP website.

49 Eight Regional Workshops on Compliance and Enforcement of MEAs have been held thus far to test, review and solicit comments and input on the Draft Manual.

50 For a more detailed discussion of the Draft Manual, see below.

51 For the text of the UNEP Guidelines in Arabic, Chinese, English, French, Russian and Spanish, see www.unep.org/DEPI/programmes/law_implementation.html.

52 See Elizabeth Mrema and Carl Bruch, 'UNEP Guidelines and Manual on Compliance with and Enforcement of Multilateral Environmental Agreements (MEAs)', in Proceedings of the 7th International Conference on Environmental Compliance and Enforcement, 9-15 April 2005, Marrakesh, Morocco, vol. 2 (forthcoming).

is essential for securing the benefit of law, environmental protection, public health and safety, deterring violations and encouraging improved performance. They are relevant not only for the present but also for future MEAs. They anticipate and intend to cover a broad range of environmental issues, including global and regional environmental protection, management of hazardous substances and chemicals, prevention and control of pollution, desertification, conservation of natural resources, biodiversity, wildlife, and environmental safety and health, to mention but a few.

The purpose of the Guidelines is to assist governments and MEA secretariats, relevant international, regional and sub-regional organizations, national enforcement agencies, NGOs, the private sector and relevant stakeholders in their efforts to enhance and support compliance with and enforcement of MEAs. The Guidelines outline actions, initiatives and measures for states to consider in strengthening national enforcement and international co-operation in combating violations of laws implementing MEAs. They are intended to facilitate consideration of compliance issues from the design and negotiation stage, and also after the entry into force of the MEAs as well as at conferences and meetings of the parties.

The Guidelines address enforcement of national laws and regulations implementing MEAs in a broad context, under which states, consistent with their obligations under such agreements, develop laws and institutions that support effective enforcement and pursue actions that deter and respond to violations of environmental law and environmental crimes. Approaches include the promotion of appropriate and effective laws and regulations. They accord significance to the development of institutional capacities through co-operation and co-ordination among governments and international organizations for increasing the effectiveness of enforcement.

Though the terms compliance and enforcement are often used loosely and interchangeably, in so far as the Guidelines are concerned compliance refers to the situation in which a state is with regard to its obligations under an MEA, i.e. whether it is in compliance or not. Enforcement, on other hand, refers to a set of actions, i.e. adopting laws and regulations, monitoring outcomes, etc., including various enabling activities and steps, which a state may take within its national territory to ensure implementation of a MEA.[53] In other words, compliance is used in an international context while enforcement is used in a national one. A term that was problematic to define throughout the negotiation process was environmental crime because it is understood differently in different jurisdictions. As a result, the Guidelines opted to use the following phraseology: violations of the provisions of MEAs.

53 See Guidelines 9 and 38, UNEP Guidelines, *supra* note 51.

Overall, the Guidelines seek solutions for addressing shortcomings in compliance and enforcement, which otherwise could undermine the effectiveness of an MEA regime, or in a party's ability to live up to its obligations. Such shortcomings may include lack of national legislation, lack of awareness of the relevant regulations including among industry and consumers, or enforcement authorities, lack of financial resources, costs of compliance, creating a financial incentive for evasion, and inadequate penalties. Other challenging problems are related to detection, dearth of human resources, institutional and technical capability, lack of information and economic intelligence and shortcomings in transboundary co-operation and monitoring.

Cross-cutting issues for MEA compliance under the UNEP Guidelines

The Guidelines, divided into three parts, are intended to inform and affect how parties implement their obligations under MEAs. The opening part, the introduction, recalls the basis of preparing the Guidelines. It acknowledges that the Guidelines are advisory in nature and that parties to agreements are best situated to choose and determine useful approaches for carrying out MEA obligations. The Guidelines, being advisory in nature, are non-binding and in no way intend to affect or alter the obligations of parties to MEAs. In fact, they specifically identify cross-cutting and common issues appearing in a number of international conventions for which implementation, compliance and enforcement could be carried out together in a holistic and synergistic manner.

Chapter I of the Guidelines[54] defines compliance as the fulfillment by the contracting parties of their obligations under an MEA. Implementation, on the other hand, covers all relevant laws, regulations, policies, and other measures and initiatives that contracting parties adopt and/or take to meet their obligations under an MEA.[55] The chapter sets forth a range of institutional mechanisms and approaches to promote compliance. Some of these may be included in the text of an MEA itself, while others may be adopted by the MEA conference of the parties or secretariat or other competent body at a later stage in implementing the MEA.[56] Such mechanisms include preparatory work required for negotiations,[57] effective participation in debates,[58] assessment of domestic capabilities during negotiations,[59] regular review of the effectiveness of an MEA[60] and compliance mechanisms after an MEA

54 Chapter I comprises 29 paragraphs.
55 Guideline 9, UNEP Guidelines, *supra* note 51.
56 Guideline 16, *ibid.*
57 Guidelines 10(a-e), *ibid.*
58 Guideline 11(a-e), *ibid.*
59 Guideline 12, *ibid.*
60 Guideline 15, *ibid.*

comes into effect.[61] Other mechanisms are national implementation plans;[62] reporting, monitoring, and verification;[63] non-adversarial mechanisms to assist parties to comply with an MEA through various economic measures including compliance mechanisms and procedures;[64] and last but not least, dispute settlement mechanisms,[65] which are hardly used in practice. The Guidelines address these approaches in varying levels of detail, but as with other such tools the Guidelines emphasize that the approaches set forth are voluntary and advisory.

Other measures covered in the chapter include a detailed variety of possible actions to be taken at the national level in order to comply with an international agreement. These national measures include preparatory measures such as compliance assessment[66] and developing a compliance plan,[67] as well as the standard complement of implementing laws and regulations.[68] Others include national implementation plans,[69] enforcement programmes,[70] economic instruments,[71] national focal points,[72] co-ordination of governmental authorities[73] and improving the efficacy of national institutions.[74] Involvement of major stakeholders such as communities, women, and youth,[75] the use of the media and other mechanisms to promote public awareness and access to judicial and administrative proceedings[76] are equally addressed. Capacity-building and technology transfer[77] as well as international co-operation[78] are also emphasized as key and important components without which effectiveness of MEAs may be undermined. Most of these national measures are also expanded upon in the second chapter, dealing with enforcement.[79]

Unlike the compliance chapter, which puts emphasis on the international context, the enforcement part in Chapter II[80] focuses on specific measures to be undertaken

61 Guideline 16, *ibid.*
62 Guideline 14(b), *ibid.*
63 Guideline 14(c), *ibid.*
64 Guideline 14(d), *ibid.*
65 Guideline 17, *ibid.*
66 Guideline 18, *ibid.*
67 Guideline 19, *ibid.*
68 Guideline 20, *ibid.*
69 Guideline 21, *ibid.*
70 Guideline 22, *ibid.*
71 Guideline 23, *ibid.*
72 Guideline 24, *ibid.*
73 Guideline 25, *ibid.*
74 Guideline 26, *ibid.*
75 Guideline 27, *ibid.*
76 Guidelines 28-32, *ibid.*
77 Guideline 33(a-f), *ibid.*
78 Guideline 34(a-h), *ibid.*.
79 It should be noted that national focal points and a few other provisions are not.
80 Chapter II comprises 15 paragraphs.

to implement MEAs at the national level. The chapter, therefore, seeks to strengthen national enforcement and international co-operation in combating violations of laws implementing MEAs.[81] The Guidelines provide a set of on-the-ground actions that a party can take at the national level for actual application and implementation of an MEA. What is apparent, however, is the overlap of issues covered in the two chapters, indicating that both the common and cross-cutting issues addressed in the Guidelines are important whether a party assesses its ability to comply with its international obligations or its national enforcement measures for the implementation of an MEA. Another reason for the overlap is historical. The Guidelines were developed through consultative processes carried out by two intergovernmental working groups, namely a Compliance Group and an Enforcement Group. Due to pressure to produce the Guidelines within the timeframe mandated by the UNEP Governing Council,[82] there was no time for the two groups to converge in a plenary session to harmonize and streamline the contents of their then draft proposals. Hence, the two independent chapters as reflected in the Guidelines contain some overlaps.

Like the compliance chapter, the enforcement chapter contains paragraphs defining the terms used.[83] Enforcement refers to the range of procedures and actions employed by a state or its competent authorities and agencies to ensure that organizations or persons potentially failing to comply with environmental laws or regulations implementing MEAs can be brought or returned into compliance and/or punished through civil, administrative or criminal action. Environmental crime refers to the violations or breaches of national environmental laws and regulations that a state determines to be subject to criminal penalties under its national laws and regulations. This flexible approach is intended to accommodate practices under different legal systems.

The subjects handled within the chapter on enforcement, most of which are similar or directly related to subjects in the compliance chapter, include developing national laws and regulations,[84] strengthening institutional frameworks, which includes designation of responsibilities to agencies with clear authority for carrying out stipulated enforcement activities,[85] and ensuring national co-ordination

81 Guideline 36, UNEP Guidelines, *supra* note 51.

82 At its 21st Session, UNEP Governing Council instructed the Executive Director of UNEP to continue to develop the Guidelines on Compliance with and Enforcement of MEAs and submit them for its consideration at its next session, in February 2002. See Compliance with and Enforcement of Multilateral Environmental Agreements, UNEP/GC.21/27, 9 February 2001, www.unep.org/gc/gc21/Documents/index2.html. This gave UNEP less than a year to ensure that the text and content of the Guidelines was agreed upon for consideration and adoption.

83 Guideline 38(a-d), UNEP Guidelines, *supra* note 51.

84 Guideline 40(a-c), *ibid.*

85 Guideline 41(a-o), *ibid.*

among relevant authorities and stakeholders.[86] Others include training of enforcement stakeholders[87] and addressing public environmental awareness and education among targeted groups and stakeholders.[88] The need to enhance international co-operation and co-ordination to facilitate consistency in laws and regulations,[89] co-operation in judicial proceedings[90] and co-operation for strengthening institutional frameworks and programmes[91] are emphasized. Equally, capacity-building and strengthening of enforcement capabilities,[92] which includes co-ordinated, technical and financial assistance to develop and maintain institutions, programmes and action plans for enforcement,[93] are underlined.

It is important to note that while regional bodies, such as the UN Economic Commission for Europe (UNECE), promote compliance of MEAs that are important to their respective regions, MEA secretariats pay particular attention to their specific MEAs as mandated by their respective conventions or COPs and MOPs. UNEP, on the other hand, through its Guidelines on Compliance with and Enforcement of MEAs, covers all types of environmental conventions, whether bilateral, sub-regional, regional or global, as well as both current and future MEAs. Consequently, while MEA secretariats or regional bodies focus on issue-based crossing-cutting matters of specific MEAs or MEAs of regional focus, through its Guidelines UNEP focuses on all MEAs and, in particular, on those which combine common cross-cutting issues. The Guidelines will, therefore, reduce the need to operate separately on implementation issues regarding most MEAs.

Reflected in the Guidelines but also easily identified in the multiple MEAs that urge MEA secretariats, parties and relevant regional and international organizations alike to co-operate and collaborate in partnership, what then are these common as well as cross-cutting issues? Identification and subsequent collaboration among stakeholders within their mandates to enforce MEAs will create synergies and re-enforce interlinkages among MEAs. As a result, duplication or conflicts will be avoided while the burden or responsibilities upon parties to fulfill their obligations under such instruments will be significantly reduced and streamlined. Common and cross-cutting measures spelled out in the Guidelines to facilitate, promote and ensure compliance with and enforcement of MEAs, which are reflected in several MEAs, are also part of the diplomatic and management measures in place to promote compliance. As elaborated earlier, they are intended as precau-

86 Guideline 42(a-c), *ibid.*
87 Guideline 43(a-i), *ibid.*
88 Guideline 44(a-f), *ibid.*
89 Guideline 46(a-c), *ibid.*
90 Guideline 47(a-b), *ibid.*
91 Guideline 48(a-j), *ibid.*
92 Guideline 49(a-e), *ibid.*
93 Guideline 49(a), *ibid.*

tionary measures to prevent non-compliance with the provisions of MEAs. Some of the cross-cutting measures spelt out in the Guidelines, but also reflected in MEA provisions as management measures to promote and ensure effective MEA implementation while taking measures to prevent non- compliance, include: i) support for capacity-building[94] and/or enhancement which includes training, environmental public awareness and education[95] particularly among targeted groups, and empowerment of relevant stakeholders for enhancing enforcement capabilities; ii) financial[96] and technical assistance[97] and transfer of technology,[98] either by shared and/or common but differentiated responsibilities[99] and/or through special funding mechanisms[100]; iii) development or introduction of appropriate national policies and legislation by adopting national policies, implementing and/or elaborating policies and measures or taking appropriate legislative, administrative and other measures to implement and enforce a convention;[101] iv) review of the effectiveness of an MEA by its COPs, MOPs or by the parties themselves;[102] v) preparation and submission of regular and periodic national reports, from annually to every four years, on the status of implementation of specific MEAs for review by COPs through specific provisions under various MEAs[103] or through decisions of

94 See Article 12(a), CBD; Article 22, Cartagena Protocol; Article 19(1-2), UNCCD; Article 10, Montreal Protocol; Article 9(2)(d), UNFCCC; Article 10(e), Kyoto Protocol; Article 11(1)(c) and 16, Rotterdam Convention; Article 12, Stockholm Convention.

95 See Article 13, CBD; Article 13, Cartagena Protocol; Article 19, UNCCD; Article 9(2), Montreal Protocol; Article 6, UNFCCC; Article 10(e), Kyoto Protocol; Article 10(4), Basel Convention; Article 10 Stockholm Convention.

96 See *supra* note 12.

97 See *supra* note 13.

98 See *supra* note 14.

99 See *supra* note 15.

100 See *supra* note 16.

101 See Article VIII(1), CITES, and Resolution 8.4, National laws for the implementation of the Convention, www.cites.org/eng/res/all/08/E08-04.pdf; Article 6, CBD; Articles 9-11, UNCCD; Articles 2A-E, Montreal Protocol; Article 4(2), UNFCCC; Article 2(1), Kyoto Protocol. Pursuant to Articles 4 and 9 of the Basel Convention, model national legislation for the transboundary movement and management of hazardous wastes was prepared and adopted by Decision II/5, *supra* note 35, and updated by COP-3 of the Basel Convention. Currently, guidelines for the preparation of national legislation for the implementation of the Convention are under preparation. See also Article 10, Rotterdam Convention; Article 3, Stockholm Convention.

102 See Article XI, CITES; Article 23(4), CBD; Article 35, Cartagena Protocol; Article 22(2)(a), UNCCD; Article 6, Montreal Protocol; Article 7, UNFCCC; Article 9, Kyoto Protocol; Article 15(5), Basel Convention; Article 18(5), Rotterdam Convention; Article 7(1), Stockholm Convention.

103 See Article VIII(7), CITES, and Resolution 11.17, National Reports, www.cites.org/eng/res/all/11/E11-17R13.pdf; Article 26, CBD; Article 33, Cartagena Protocol; Article 26, UNCCD; Article 7, Montreal Protocol; Articles 12 and 14, UNFCCC; Articles 5 and 7, Kyoto Protocol; Article 13(III), Basel Convention; Article 14, Rotterdam Convention; Article 15, Stockholm Convention. Egypt alone, for example, submitted 59 reports between December 2004 and December 2006 to different environmental bodies, often with similar content but different requirements and details. See analysis done in Reporting Obligations Database, Reporting overview: Egypt, rod.eionet.eu.int/csmain?COUNTRY_ID=109&ORD=NEXT_REPORTING,%20NEXT_DEADLINE.

COPs/MOPs;[104] vi) development of national implementation or compliance plans, strategies and procedures;[105] vii) designation or establishment of focal points and/or competent national authorities[106] to co-ordinate activities for the enforcement of laws and regulations implementing specific conventions, to monitor and evaluate implementation, to collect, report and analyze data, including its qualitative and quantitative verification, and to provide information about investigations, to liaise with secretariats and to exchange information and data; viii) inclusion within the instruments themselves,[107] or by a COP decision or resolution,[108] of non-confrontational dispute settlement mechanisms in the form of review by Implementation,[109] Compliance[110] or Non-Compliance Committees[111]; ix) involvement, through participation as observers in COPs and MOPs, of a wide range of major national stakeholders, such as non-governmental organizations,[112] women,[113] youth[114] and the media as modes of raising awareness and educating the public[115] in the national implementation of conventions; x) encouraging public access to

104 See Ramsar Convention, Recommendation 2.1, Submission of National Reports, www.ramsar.org/rec/key_rec_2_index.htm; See also COP-4 (June 1994), Convention on the Conservation of Migratory Species of Wild Animals, 23 June 1979, in force 1 November 1983, 19 *International Legal Materials* (1980), www.cms.int/documents/convtxt/cms_convtxt.htm.

105 See Articles 6(a) and 18(2), CBD.

106 See Article IX(1)(a), CITES, Management Authorities, and Article IX(1)(b), Scientific Authorities; for the CBD focal points see www.biodiv.org/world/map.aspx; Article 4, Cartagena Protocol (see also www.biodiv.org/biosafety/cna.aspx); Article 5, Basel Convention; Articles 16 and 18, Annex II, Article 5 and Annex III, Article 7, UNCCD; Article 2(7) and 5, Basel Convention; Article 4, Rotterdam Convention; Article 9(3), Stockholm Convention. Often, focal points are established in the ministries responsible for the environment but in other cases are spread out elsewhere in other government departments, national environmental authorities, national secretariats or scientific institutions, to mention but a few.

107 See Article 34, Biosafety Protocol; Articles 6 and 17, Kyoto Protocol; Article 27, UNCCD; Article 17; Rotterdam Convention; Article 17, Stockholm Convention; Article 15, Basel Convention.

108 See Basel Convention, Decisions VI/12 and VI/13, *supra* note 36.

109 See Convention on Long-range Transboundary Air Pollution, Geneva, 13 November 1979, in force 16 March 1983, 18 *International Legal Materials* (1979) 1442, www.unece.org/env/lrtap/full%20text/1979.CLRTAP.e.pdf, Decision 1997/2, Annex V, The Implementation Committee, its structure and functions and procedures for review of compliance, www.unece.org/env/eb/Eb_decision.htm, as amended in 2001; UNCCD Decision 1/5, Additional Procedures or Institutional Mechanisms to Assist in the Review of the Implementation of the Committee, ICCD/COP(5)/11/Add.1, www.unccd.int/cop/officialdocs/cop5/pdf/11add1eng.pdf.

110 See the Basel Convention Compliance Committee and the Aarhus Convention Compliance Committee.

111 See Article 8, Montreal Protocol and Annex IV and V, Report of the 4th MOP, *supra* note 43, and Annex II, Report of 10th MOP, *supra* note 30. See also Kyoto Protocol, Decision 24/CP.7 and Annex, *supra* note 31.

112 See Article XI(7), CITES; Preamble, para. 14 and Article 23, CBD; Article 29(4), Cartagena Protocol; Articles 5(d), 19(1) and 22(7), UNCCD; Article 11(5), Montreal Protocol; Article 7, UNFCCC; Articles 15(6) and 16(1), Kyoto Protocol; Preamble, para. 7 and Article 18(5)(b) Rotterdam Convention; Preamble, para. 14 and Article 19(5)(b), Stockholm Convention.

113 See Preamble, para. 13, CBD; Preamble, para. 20 and Articles 8(2)(c), 19(2)(f) and 19(3)(e), UNCCD; Preamble, para. 2 and Articles 7(2) and 10(1), Stockholm Convention.

114 See Articles 5 and 19, UNCCD.

115 See Article 13, CBD; Article 10(4), Stockholm Convention.

administrative and judicial procedures, and environmental information;[116] and xi) international co-operation and co-ordination by the establishment of communication channels and information exchanges among relevant national and international organizations.[117]

The Guidelines and management measures provided in the two chapters are relatively comprehensive but details are not provided as to how they should actually be used in practice. They were designed as an enumeration of considerations, approaches and tools. Consequently, they are just a toolbox or checklist of possible approaches to be used to ensure effective compliance with and enforcement of MEAs. In more than three years of intense review and discussion by experts following the adoption of the Guidelines[118] few, if any, practices or considerations have been raised that are not already provided for in the Guidelines. This is partly due to the broad range of experts, countries, and perspectives involved both in the elaboration and implementation of the Guidelines. It is also due to the general nature of the Guidelines,[119] which do not provide much detail or guidance on how to use the tools it presents, either individually or in concert with other tools.

Role played by UNEP to promote compliance with and enforcement of cross-cutting issues in MEAs.

With the adoption of the Guidelines, as requested by its Governing Council, UNEP has disseminated the Guidelines through its programme of work and in close collaboration with governments and international organizations to governments, MEA secretariats, international organizations and other institutions involved with the implementation of MEAs.[120] It has strengthened and continues to strengthen the capacity of developing countries and countries with economies in transition to implement and enforce MEAs using, inter alia, the Guidelines. As mentioned above, in strengthening the capacity of developing countries to implement and enforce MEAs, UNEP has pursued a three-pronged approach. Activities include developing and refining a Manual on Compliance with and Enforcement of MEAs; convening a series of eight regional workshops to disseminate the Guidelines, test and review the Manual as well as build the capacity of countries to better comply with and enforce MEAs; and conducting pilot projects related to common and

116 See Article 6, UNFCCC; Article 23, Cartagena Protocol; Article 19, UNCCD.

117 See Article 10, Basel Convention; Annex II, Vienna Ozone Convention; Article 9, Montreal Convention; Articles 17 and 18, CBD; Article 12, UNCCD.

118 Between 2003 and 2005, UNEP organized and conducted eight regional workshops around the globe to disseminate the Guidelines, enhance capacity of enforcement officials and raise awareness on the contents of the Guidelines.

119 For example, some Guidelines provide two words regarding the potential role of certification systems in implementing MEAs. See Certification systems in Guideline 41(h), UNEP Guidelines, *supra* note 51, which does not include the preambular language of Guideline 41.

120 *Supra* note 51.

cross-cutting issues on compliance and enforcement of MEAs both generally and based on MEA clusters.

In this regard, UNEP has developed a Manual[121] that expands upon the tools set forth in the Guidelines. If the Guidelines are a toolbox, then the Manual is a sort of User's Guide for those tools. Structured as an annotated commentary to the Guidelines and using clear, simple language, the Manual provides explanatory texts, case studies, checklists, references to additional resources and annexes with supplementary information. UNEP initially developed the Manual as a desk study, and has revised it following each of the series of regional workshops organized and conducted, inter alia, for that purpose. The revisions have taken into account substantive, editorial, and formatting comments as well as new case studies of national, regional, and international experiences provided and highlighted in the workshops. UNEP has also updated the Manual on a rolling basis to incorporate feedback from other events and reviewers.

UNEP has also organized and convened a series of regional workshops between 2003-2005 on compliance with and enforcement of MEAs. These workshops have had two primary goals. They sought to build the capacity of developing countries and countries with economies in transition to use the tools and checklist provided in the Guidelines and Manual to improve their compliance with and enforcement of MEAs. In this capacity, UNEP familiarized enforcement officials and other experts with the use of the Guidelines and Manual. In addition, MEA secretariats have played a key role in educating experts about best practices in implementing and enforcing their respective agreements. These capacity-building workshops have also facilitated an exchange of experiences within a region regarding how to develop, comply with, implement, and enforce MEAs. In this context, experts have been able to learn from the experiences of countries with similar legal and cultural traditions and similar social and economic levels of development. Through these exchanges of experiences as well as through the specific discussions regarding the Manual, UNEP has been able to identify new case studies, explanatory texts, best practices and lessons learned from problematic experiences. If national experiences are to be emulated, caution can be exercised and adjustments can be made to suit specific conditions. As such, the workshops facilitated the iterative revision and refinement of the Manual and helped to ensure regional balance and relevance.

The regional workshops have also provided a sustained dialogue regarding the challenges that developing countries face in complying with and enforcing MEAs, as well as regarding ways that countries can and do to meet those challenges. It

121 *Supra* note 48. The final Manual is forthcoming, with publication in English expected in May 2006, with versions in the other UN languages to follow, resources permitting.

is not surprising that limited technical, financial, and human resources are a significant concern for many countries. Nevertheless, the vast majority of countries participating in the workshops have had at least a few and in some cases many innovative experiences in developing, implementing, and enforcing MEAs. While resources remain a chronic and sometimes severe challenge, countries are developing a variety of creative mechanisms and institutions to ensure they effectively comply with and enforce their obligations under the various MEAs to which they are parties.

Due to the limited resources available to many developing countries the workshops have seen recurrent, widespread interest in a few general themes and approaches calling upon international organizations to assist them to implement their commitments in more efficient ways. There is particular interest, for instance, in creating synergies among related MEAs. These synergies may be thematic, so that a country may implement a cluster of related agreements through a single, holistic law. For example, a national biodiversity law[122] could implement the Convention on Biological Diversity (CBD), the Convention on Migratory Species (CMS), the Convention on International Trade in Endangered Species (CITES), the Ramsar Convention on Wetlands and the World Heritage Convention.[123] Rather than undertake five separate legislative reforms that could yield a patchwork of overlapping and at times conflicting or contradictory laws, a country may opt to undertake a single process yielding a more effective, integrated law that addresses potential overlaps and conflicts in a deliberate fashion. This approach has gathered greater support from small island developing states in particular, due to their small size and the unique challenges they face. Moreover, the amount of time necessary to produce the larger harmonized national legislation to implement a cluster of MEAs is generally perceived to be less than that needed to develop a series of separate implementing laws or regulations. Similar thematic clusters may occur when developing implementing legislation for MEAs related to chemical and hazardous substances and wastes, regional seas and the atmosphere.

Operational synergies are also possible, particularly in capacity-building. For example, customs officers are at the forefront in controlling, reducing and hopefully finally in eliminating illegal trade in endangered species, ozone-depleting substances, hazardous wastes and certain chemicals. While expert knowledge and comprehensive training are often necessary to discern legal from illegal trade, basic training and awareness-raising among customs officers can go a long way in

122 See South Africa National Environmental Management Biodiversity Act No. 10 of 2004, Government Gazatte No. 26436 of 7 June 2004 and Australia Environment Protection and Biodiversity Conservation Act No. 91 of 1999, as amended.

123 Currently, UNEP is collaborating with, as requested by, the Organization of the East Caribbean States to develop framework harmonized legislation for implementation of a cluster of biodiversity-related MEAs to be used as a guidance tool for its member states in developing their national legislation.

helping to identify potentially illegal trade. Accordingly, UNEP, INTERPOL, the World Customs Organization and the secretariats of a number of MEAs, in particular those with trade-related provisions, have launched the Green Customs Initiative.[124] The Initiative aims to build and enhance the capacity of customs officers on trade-related MEAs through the development of manuals and modules, to be used in regional and national training programmes, on their role for the implementation of specific MEAs or clusters of MEAs.[125] Other operational synergies may be seen in capacity-building and training of prosecutors, judges and magistrates who are charged with prosecuting and deciding cases dealing with potential violations of national laws that implement MEAs.[126] As such, a general awareness of and sensitivity to MEAs can be essential for effective enforcement. General training on clusters of MEAs, such as trade-related MEAs, biodiversity-related MEAs and chemical and/or waste-related MEAs, to mention but few, may be more appropriate and cost-effective than single MEA-specific training.

UNEP, in collaboration with MEA secretariats and other international and regional bodies, is undertaking a series of projects to assist and support parties to various MEAs to comply with and enforce MEA obligations. These projects utilize the Guidelines and the Manual on Compliance with and Enforcement of MEAs in various ways, such as to build capacity and develop innovative approaches in a number of areas. These projects include, for instance, capacity-building to improve the effectiveness of various actors participating in MEA negotiations,[127] the im-

124 For more information on the initiative see www.greencustoms.org/.

125 A series of six regional training workshops for customs officials to build and enhance their capacity to implement trade-related MEAs were organized by UNEP and held in 2005. These workshops also reviewed, tested and disseminated a draft Manual prepared for customs officials for implementation of MEAs with trade-related provisions.

126 In this regard, several regional and national training programmes on implementation of international environmental law through clusters of MEAs or generally MEAs targeting a specific group of enforcement officers or stakeholders have been held and/or are currently being organized by different international organizations, including UNEP, to build and enhance the capacity of targeted subjects related to implementation, compliance and enforcement of MEAs.

127 In collaboration with partners such as FIELD, Stakeholder Forum, University of Joensuu, Finland, Environment Canada and others, UNEP has developed a *Primer for Negotiators of MEAs*, a *Manual for NGOs working on MEAs - Negotiating and Implementing MEAs*, a *Negotiator's Handbook on International Freshwater Agreements* and is currently developing a *MEA Negotiator's Handbook* with Environment Canada and the University of Joensuu, to be launched in June 2006. UNEP uses these and other materials to enhance the capacity of negotiators through regular training courses such as the annual UNEP-University of Joensuu Course on International Environmental Law-making and Diplomacy. These tools together with accompanying training materials are being and will continue to be tested and used to build and enhance capacities of MEA negotiators through a series of UNEP-organized regional and national training courses or workshops.

plementation of a cluster of MEAs through national legislation and regulations[128] and the development of MEA compliance and enforcement indicators.[129] Other approaches include enhancing public participation in the development of national reports on the implementation of certain MEAs,[130] developing issue-based models for the implementation of MEAs,[131] conducting transboundary environmental impact assessments,[132] developing guidance and capacity-building tools for the legal implementation of regional seas conventions and action plans[133] and other practical implementation and enforcement measures for MEAs with common and/or cross-cutting issues.

128 In collaboration with Liberian partners and the Environmental Law Institute (ELI), UNEP is working with the Government of Liberia to review and revise their forestry legislation to implement MEAs and other forest related international instruments; with OECS, UNEP has developed framework harmonized legislation for the implementation of a cluster of biodiversity-related MEAs; and with SPREP and the Government of Tonga, UNEP is developing national legislation implementing the cluster of chemicals and waste-related MEAs. South Africa and Australia have already tested this approach through the development of their national biodiversity legislation. See *supra* note 122.

129 In collaboration with partners such as the International Network on Environmental Compliance and Enforcement (INECE), UNEP has developed environmental indicators on compliance with and enforcement of a cluster of biodiversity-related MEAs. The indicators are currently being pilot tested in four countries (Brazil, Costa Rica, Kenya and South Africa) before they are finalized for use as a guidance tool. For more information see www.inece.org/.

130 In collaboration with partners such as EcoPravo, Kiev, Ukraine, UNEP has assisted the Government of Ukraine in promoting public participation in the development and review of national reports for MEA Secretariats. The programme highlighted ways to involve the public in national reporting for the implementation of international commitments made by Ukraine, as well as the role of public participation in the preparation of national reports for a number of MEAs, and tested them in the Conferences of the Parties. UNEP is working with four countries (Ghana, Indonesia, Panama and Seychelles) on harmonization of national reporting to global biodiversity-related MEAs. See also UNEP World Conservation Monitoring Centre, *Towards the Harmonization of National Reporting: Report of a workshop convened by UNEP* (UNEP-WCMC: Cambrdige, 2000), www.unep-wcmc.org/conventions/harmonization/workshop/REPORT.pdf.

131 UNEP, in partnership with selected countries in Africa, Europe and countries with economies in transition is currently also developing issue-based modules for implementation of biodiversity-related MEAs intended to improve the coherence of implementation by providing the same information to all actors and by identifying overlaps, potential conflicts and possible gaps. For more information on the Issue Based Modules Project, see www.svs-unepibmdb.net/.

132 In collaboration with partners such as ELI and the African Centre for Technology Studies (ACTS), UNEP is undertaking case studies on improving public participation in the implementation of transboundary international water agreements through transboundary environmental impact assessment, as well as enhancing capacity through training selected countries on implementation and enforcement of MEAs related to access to genetic resources and benefit-sharing (ABS).

133 Through the Regional Seas Co-ordination Units and the UNEP Global Programme of Action for the Protection of the Marine Environment from Land-based Activities, UNEP has developed an Outline for Guidance on the Review and Elaboration of National Legislation to Implement Regional Seas and Actions Plans which is being used and tested through a series of regional training programmes, in particular in the Caribbean and South Pacific regions, on implementation and enforcement of regional seas conventions.

Conclusion

Although in most cases MEAs take only a few years to develop, with exceptions being found with the UN Convention on the Law of the Sea,[134] which took approximately ten years and the UN Convention on the Law of the Non-Navigational Uses of International Watercourses,[135] which took approximately 30 years, implementation continues for as long as the instrument is in force or operation. Consequently, long-term measures are required to be put in place to ensure the continuous promotion of their implementation, compliance and enforcement. Creating synergies through the clustering of MEAs and promoting implementation of cross-cutting issues becomes one of the key mechanisms to support parties to MEAs while reducing their burden of implementing the many MEAs to which they are parties.

134 United Nations Convention on the Law of the Sea, 10 December 1982, in force 16 November 1994, 21 *International Legal Materials* (1982) 1261, www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

135 United Nations Convention on the Non-navigational Uses of International Watercourses, GA Res. 51/229, 21 May 1997, not yet in force, 36 *International Legal Materials*, untreaty.un.org/ilc/texts/instruments/english/conventions/8_3_1997.pdf.

Theory and Practice of Non-state Participation in Environmental and Forest-related Decision-Making[1]

Tim Cadman[2]

Introduction

The paper is divided into two parts. It begins with a brief overview of some theoretical elements that contribute to building effective capacity for state and non-state participation in environmental decision-making. The second part of the paper provides a historical outline of the evolution of non-state participation in environmental policy-making within various United Nations institutions and initiatives, most particularly by non-government organizations (NGOs). It continues with an anecdotal selection of national legislation and multilateral environmental agreements, including the work of the United National Forum on Forests, which contain provisions for public participation. This is followed by a review of sources, which comment on globalization and the development of non-governmental approaches to regulation, and the example of forest management certification is presented.

1 Some of the materials presented in this paper were included in a paper prepared by the author for the Environmental Research Event, Hobart, Tasmania, 29 November - 2 December 2005, www.ere.org.au.

2 School of Government, University of Tasmania, Australia. The author was one of the participants of the 2005 University of Joensuu – UNEP Course on International Environmental Law-making and Diplomacy.

Concepts of Participation Relevant to Forest Policy and Law-making

Below, some basic general theories of participation that are relevant to environmental policy-making and forests shall be outlined.

Environmental Democracy

Mason defines environmental democracy as 'a participatory and ecologically rational form of collective decision-making'[3] which rests upon the view that communication and understanding between people is based upon, or at least allows for, agreements based upon convincing reasons rather than force or deception.[4] This view is presented as a normative principle and is grounded in the political philosophy of Jürgen Habermas.[5] Habermas argues that 'only those action norms are valid in which all possibly affected persons could agree as participants in rational discourses',[6] a principle that Mason believes should underpin the communication associated with political decision-making processes about the environment.[7] Mason identifies participation and meaningful involvement in environmental policy-making on all governmental and administrational levels as a test of both democratic legitimacy and the greening of human rights.[8]

Participation: Two approaches

The participation ladder

Despite being over three decades old, Arnstein's Ladder of Citizen Participation still serves as one of the most cogent typological analyses of the 'participation of the governed in their government, in theory, the cornerstone of democracy.'[9] She considers participation a 'categorical term for citizen power', which represents a significant mechanism for social reform as it redistributes power between the haves and the have-nots, and enables the disadvantaged to share in the benefits of affluent society. Significantly, she emphasizes that 'participation without redistribution of power is an empty and frustrating process for the powerless.'[10] Arnstein's model serves as a useful hierarchical typology of power. It categorizes the extent of participation into non-participation, degrees of tokenism and degrees of citizen power, and relates it to the level - or rungs on the ladder - of participa-

3 M. Mason, *Environmental Democracy* (St Martin's Press: New York, 1999) at 1.

4 *Ibid.*, at 8.

5 *Ibid.*, at 8-9.

6 J. Habermas, *Between Facts and Norms: Contributions to a Discourse Theory of Law and Democracy* (Blackwell Publishers Ltd: Oxford, 1996) at 459.

7 Mason, *Environmental Democracy*, *supra* note 3, at 9.

8 *Ibid.*, at 73-76.

9 S. Arnstein, 'A Ladder of Citizen Participation', 35 *Journal of the American Institute of Planners* (1969), 216-224 at 216.

10 *Ibid.*

tion. These are described as manipulation, therapy, consultation, informing, placation, partnership, delegated power and citizen control. Such a typology may provide a useful filter through which most decision-making processes could be screened. The ability for a participant to ascertain the extent to which they have control might provide a useful measure in determining whether participation in a given decision-making process will deliver an outcome that meets the needs of the participant. In some cases, refusing to participate could be more productive than taking part.

The participation chain

Simmons and Birchall provide another model, which they call the participation chain.[11] This model includes both the demand side (the general public) and the supply side (service providers, in our case, the agencies of nation state) and places participation within a context of influencing factors. They identify four links in this chain (motivation, mobilization, resources and dynamics) and argue: 'each link needs to be made as strong as possible if participation itself is to be strengthened.'[12] Motivation to participate on the demand side is dependent on the perception that individuals and groups will indeed benefit from participating; on the supply side, service providers 'must decide whether or not they actually want greater participation.'[13] Mobilization requires honest engagement on the part of service providers and consumers, as well as using appropriate methods for engaging participants and making sure the right means to allow for participation are employed. Resources, which strengthen participation, are identified under the broader heading of community development and include training, advocacy schemes, and increasing participants' skills and confidence. Finally, a strong dynamics link requires that agencies understand and communicate their own reasons (motivations) for participation, that the limits to the scope of the initiatives and opportunities are defined in order to manage all participants' expectations, that feedback opportunities are available and that power and other resource imbalances are recognized.[14]

Institutional theory and structure

Ostrom argues that governments face considerable difficulties in determining 'how best to govern natural resources used by many individuals in common.' Citing the case of overfishing off the New England coast, she points out that although everyone knows there is a problem of over-extraction no one can agree how to address the problem.[15] She illustrates this dilemma by quoting Hardin: 'each man is locked

11 See R. Simmons and J. Birchall, 'A Joined-up Approach to user Participation in Public services: Strengthening the 'Participation Chain'', 39 *Social Policy and Administration* (2005), 260-283

12 *Ibid.*, at 277.

13 *Ibid.*, at 275.

14 *Ibid.*, at 277-278.

15 E. Ostrom, *Governing the Commons: The Evolution of institutions for collective action* (Cambridge University Press, 1990) at 1.

into a system that compels him to increase his herd without limit – in a world that is limited.'[16] Her response to Hardin is to examine the types of institutions that might be capable of addressing the need for collective action, whilst delivering collective benefits.[17] Whilst acknowledging that many scholars see state control as the only solution, her interest lies in exploring the kinds of institution from which both the state and private individuals might benefit, arguing that although some form of central control is certainly significant, getting the institutions right is of paramount importance.[18] Of interest to this study is her analysis of the successes and failures of a number of natural resource-based enterprises from around the world and the institutional design principles that she deduces as delivering successful outcomes.[19] Participation in decision-making, conflict resolution and the right to organize are identified as key elements in designing institutions for resource management. Of particular interest is the fact that of the eight failed institutions she investigates out of 21 case studies, seven of them were missing one, two or all of these design principles.

Capacity-building

For the sake of convenience we will define capacity-building here as 'the sum of efforts needed to develop, enhance and utilize the skills of people and institutions to follow a path of sustainable development.'[20] Mason breaks down the term into three components: participative capacity, integrative capacity and strategic capacity.[21] He supports the definition of successful environmental policies as those which lead to quality outcomes that are based on decision-making which includes both public and private actors and which address a range of ecological risks. Any system's capacity/ability to develop environmental policy that identifies and solves ecological problems requires three structural framework conditions: cognitive-informational (available, and applied, environmental knowledge); political-

16 G. Hardin, 'The Tragedy of the Commons', 162 *Science* (1968), cited in Ostrom, *Governing the Commons*, *ibid*., at 244.

17 Ostrom, *Governing the Commons*, *supra* note 15, at 5-6.

18 *Ibid*., at 11-14.

19 *Ibid*., at 90.

20 United Nations Development Programme, 2001 cited in T.J. Downs, 'A Participatory Integrated Capacity Building Approach to the Theory and Practice of Sustainability: Mexico and New England Watershed Case Studies', in W.L. Filho et al. (eds.), *International Experiences on Sustainability* (Peter Lang: Frankfurt am Main, 2002) 179-205 at 186.

21 Mason, *Environmental Democracy*, *supra* note 3, at 72-86.

institutional (accepted constitutional, institutional and legislative norms and rules); and economic-technological (money and expertise).[22] Again, participation is presented in this case as a key component of successful capacity-building.

Non-state Participation in Practice

Birnie outlines the growth of NGO participation within various United Nations environmental policy-making arenas,[23] and some further brief commentary by Mason and Correl and Betsill points to their influence on multilateral environmental agreements.[24] This legacy can be seen in the role accorded to non-state participants in environmental decision-making in national and international environmental legislation, agreements and institutions. Some examples are provided by the United States' National Environmental Policy Act,[25] *Agenda 21*,[26] the Aarhus Convention[27] and the United Nations Framework on Forests (UNFF). Ruggie,[28] Held et al.,[29] Haufler[30] and others comment on the impacts of the globalized marketplace on civil society and business relations, and in particular on how multinational corporations and transnational NGOs have organized themselves around non-state regulatory mechanisms as a response to the changing role of government and the increasing participation of non-state interests in environmental decision-making. Cashore et al. focus on the rise of what they term non-state market driven authority, and provide an example of the market-based approach to governance and regulation through the Forest Stewardship Council forest management certification programme.[31]

22 *Ibid*., at 72-73. See also M. Jänicke, 'Conditions for Environmental Policy Success: An International Comparison', 12 *The Environmentalist* (1992), 47-58; M. Jänicke, 'Democracy as a condition for environmental policy success: the importance of non-institutional factors', in W. Lafferty and J. Meadwocroft (eds.), *Democracy and the Environment* (Edward Elgar Publishing: Cheltenham, 1996) 71-85; M. Jänicke, 'The Political System's Capacity for Environmental Policy', in M. Jänicke and H. Weidner, *Successful Environmental Policy: A Critical Evaluation* (Springer: Berlin, 1997).

23 P. Birnie, 'The UN and the Environment', in A. Roberts and B. Kingsbury (eds.), *United Nations, Divided World: The UN's Roles in International Relations* (Oxford University Press, 2000) 327-383.

24 See Mason, *Environmental Democracy*, *supra* note 3, and E. Corell, and M. Betsill, 'NGO Influence in International Environmental Negotiations: A Framework Analysis', 1 *Global Environmental Politics* (2001) 65-85.

25 National Environmental Policy Act (1969), 42 U.S.C. 4321-4347, ceq.eh.doe.gov/nepa/regs/nepa/nepaeqia.htm (hereinafter NEPA).

26 *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

27 Aarhus Convention, *infra* note 50.

28 J.G. Ruggie, 'Taking Embedded Liberalism Global: The Corporate Connection', in D. Held and M. Koenig-Archibugi (eds.), *Taming Globalization: Frontiers of Governance* (Polity Press: Cambridge, 2003) at 36.

29 D. Held et al., *Global Transformations: Politics, Economics and Culture* (Polity Press: Cambridge, 1999).

30 V. Haufler, *A Public Role for the Private Sector: Industry self-regulation* (Carnegie Endowment for International Peace: Washington D.C., 2001)

31 B. Cashore, G. Auld and D. Newsom, *Governing through Markets: Forest certification and the emergence of non-state authority* (Yale University Press: New Haven, 2004).

The Growth of non-state participation in the United Nations: A historical summary

No examination of the rising non-state contribution to global environmental discourse would be complete without an institutional analysis of the growth of environmental policy within the United Nations and the associated rise of NGOs in decision-making. UN institutional structures and roles and responsibilities are complicated, but it will suffice here to trace the significant elements within the UN upon which subsequent initiatives have been based. An important first step in 1948 - which occurred outside the UN itself, but which was sponsored by the United Nations Educational, Cultural and Scientific Organization (UNESCO) – was the establishment of the International Union for the Conservation of Nature and Natural Resources (IUCN), now the World Conservation Union.[32] Shortly thereafter, the UN's Economic and Social Council (ECOSOC) weighed in by convening the 1949 UN Scientific Conference on the Conservation and Utilization of Resources, although this was limited to information sharing regarding resource use and conservation. Birnie stresses the significance of the IUCN. Consisting, as it does, of state and non-state actors 'has enabled it to be [more] forward-looking and innovative in its approaches than exclusively intergovernmental agencies: private, public and governmental concerns can be brought together to prepare more coherent environmental strategies.'[33] She argues that the issues identified at the United Nations Conference on the Human Environment (UNCHE) in 1972 and the subsequent action plan and related bureaucracies made the greening of the UN and its associated institutions by various NGOs unavoidable. The Stockholm Declaration[34] and the United Nations Environment Programme (UNEP), which arose out of the UNCHE,[35] placed the imperative for environmental action on the global level, and set the future for discussions about the environment within a normative context. For the next few years UNEP set about fulfilling its mandate 'through a strategy of co-ordinated action and close collaboration amongst governments, IGOs, NGOs, UN Bodies, and private societies of all kinds on a wide variety of international issues.'[36]

NGO scrutiny of the Bretton Woods institutions throughout the 1980s also led to policy changes. In 1987, The World Bank, heavily criticized by NGOs for its lack of consultation with local people affected by development/resettlement projects - such as the Narvada Valley inundation programme in India and in the forests of

32 Birnie, 'The UN and the Environment', *supra* note 23, at 335.

33 *Ibid.*, at 336.

34 Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972, 11 *International Legal Materials* (1972) 1416, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503.

35 For a more detailed account of the birth of UNEP, see the paper by Donald Kaniaru in the present Review.

36 Birnie, 'The UN and the Environment', *supra* note 23, at 350.

Rondônia province in Brazil - established a central environmental department. This department administers another UN initiative, the Global Environment Facility (GEF), a fund designed to encourage sustainable development and environmental remediation programmes.[37] Further criticisms against other institutions, including the General Agreement on Tariffs and Trade (GATT), were acknowledged in the Brundtland Report, *Our Common Future*.[38] In 1992, influenced by the Brundtland Report, the UN General Assembly agreed to convene the United Nations Conference on Environment and Development (UNCED). Birnie identifies two interesting developments in non-state participation in UNCED: sponsorship of the event included support from major corporations such as ICI and private foundations, such as the MacArthur and Rockerfeller Foundations, and the role played by NGOs in a number of preparatory committees (PrepComs), the extent of which she contrasts with UNHCE preparations, where civil society participation was confined largely to inclusion in a cross-sectoral study group to prepare a report designed to identify items for discussion. Birnie acknowledges 'the unprecedented level of public participation in the negotiations in the lead-up to UNCED, and the vast number of NGO observers who were present in Rio to lobby government delegates.'[39]

Interestingly, her criticisms of the UN are directly related to its lack of capacity to effectively deliver good governance at a global level and the onus this places on NGOs:

> The UN system is not effective in assessing, reviewing, and monitoring either the effects of activities or compliance with prescribed measures. Effective scrutiny has been left to NGOs, which have performed the task effectively in several areas, but their activities are necessarily issue-oriented: they cannot themselves carry out the required reforms to remedy the whole range of weaknesses in the system, especially the co-ordinative failures. It is governments that have to legislate and to ensure that their national programmes conform to the UN goals for sustainable development. It is here that NGOs (now often referred to as NGAs – non-governmental actors) can provide the necessary stimulus.[40]

Corell and Betsill agree on the contribution of NGOs to environmental policy-making, commenting that they 'influence international environmental negotiations when they intentionally transmit information to negotiators that alters both the negotiating process and outcome from what would have occurred otherwise.'[41]

37 *Ibid.*, at 358-360. For a more detailed account of the GEF and its functions, see the paper by Ahmed Djoghlaf in the present Review.

38 World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press, 1987), UN Doc. A/42/47 (1987)(The Brundtland Report).

39 Birnie, 'The UN and the Environment', *supra* note 23, at 368

40 *Ibid.*, at 372

41 Corell and Betsill, 'NGO Influence', *supra* note 24.

Mason attributes the significance of non-state actors – both multinational corporations and non-governmental organizations – in shaping global environmental regimes to the rise of international legal institutions and such environmental regimes. The rise of the importance of the United Nations and its support for NGOs culminates in his mind with the participatory role accorded to them at UNCED. He acknowledges that NGOs are placed by some commentators 'at the vanguard of a new global civil society'[42] and attributes the penetration of environmental norms throughout international law to NGO participation in UN fora. He sees the global nature of NGO participation as an indicator of the need for transnational public law litigation to guarantee human rights, and likewise attributes the rise of international legal institutions and environmental regimes to non-state actors. Like Birnie, he sees the NGO contribution as being challenged by a lack of participative capacity, the main components of which he identifies as resources and technical capability.[43] These important recurring themes which influence effective participation are further explored below.

Public participation in environmental regulation: some UN-inspired examples

Having explored the historical contribution of non-state interests to the global environmental discourse, it is worth briefly exploring and commenting on the level of recognition accorded to non-state participants within national and international environmental agreements. An early UN reference to non-state participation in decision-making processes is found in a 1963 definition of community development:

> The process by which the efforts of the people themselves are united with those of governmental authorities to improve the economic, social and cultural conditions of communities, to integrate these communities into the life of the nation, and to enable them to contribute fully to national progress. This complex of processes is, therefore, made up of two essential elements: the participation by the people themselves in efforts to improve their level of living, with as much reliance as possible on their own initiative; and the provision of technical and other services in ways which encourage initiative, self-help and mutual help and make these more effective.[44]

Here it is interesting to note the importance placed on the involvement of people in generating solutions to their own problems, and the provision of resources to facilitate that involvement, perhaps anticipating the later, more sophisticated, concepts of sustainable development and capacity-building.

42 Mason, *Environmental Democracy*, *supra* note 3, at 218.

43 *Ibid.*, at 217-230.

44 Ad Hoc Group of Experts on Community Development, *Community development and national development*: R*eport by an ad hoc group of experts appointed by the Secretary-General of the United Nations*, UN Doc. E/CN.5/379/Rev.1 (United Nations: New York, 1963), cited in F. Schmidt, 'Citizen Participation: An Essay on Applications of Citizen Participation to Extension Planning', University of Vermont, 1998, ag.arizona.edu/fcs/cyfernet/nowg/cd_essay.html.

The late 1960s witnessed some of the first attempts at developing national laws for environmental protection, and it is possible to see echoes of the 1963 UN definition articulated in the United States' National Environmental Policy Act of 1969:

> It is the continuing policy of the Federal Government, in co-operation with State and local governments, and other concerned public and private organizations, to use all practical means and measures, including financial and technical assistance, in a manner calculated to foster and promote general welfare, to create and maintain conditions under which man and nature can exist in productive harmony, and fulfil the social, economic, and other requirements of present and future generations of Americans.[45]

There are some further interesting elements within the Act, including a recognition of the need to make use of 'the natural and social sciences and the environmental design arts in planning and decision-making', to develop 'appropriate alternatives to […] any proposal which involves unresolved conflicts' and to 'make available to States, counties, municipalities, institutions, and individuals, advice and information useful in restoring, maintaining and enhancing the quality of the environment.'[46] The recognition of the social sciences, the value of conflict resolution and the provision of information are all elements that appear in later agreements. In the Act we can see some precursors to what have now become accepted environmental norms, including multi-stakeholder (state and non-state) participation in, and access to, information sharing, as well as the three pillars/triple bottom line concept of sustainability, which appear in the Act as 'social, economic and other requirements.'

By UNCED in 1992 these approaches were becoming increasingly codified in international agreements, as exemplified by *Agenda 21*, the document that was to emerge from UNCED:

> Environmental issues are best handled with the participation of all concerned citizens, at the relevant level. At the national level, each individual shall have appropriate access to information concerning the environment that is held by public authorities […] and the opportunity to participate in decision-making processes. States shall facilitate and encourage public awareness and participation by making information publicly available. Effective access to judicial and administrative proceedings, including redress and remedy shall be provided.[47]

The role of NGOs and the private sector, including their nature and extent of participation, is also formally acknowledged:

45 Section 101(a), NEPA.

46 Section 102 A, E and G, NEPA.

47 *Agenda 21*, *supra* note 26, at 10.

> 27.1 Non-governmental organizations play a vital role in the shaping and implementation of participatory democracy. Their credibility lies in the responsible and constructive role they play in society […] [I]ndependence is a major attribute of non-governmental organizations and is the precondition of real participation. […]
> 27.5 Society, Governments and international bodies should develop mechanisms to allow non-governmental organizations to play their partnership role responsibly and effectively in the process of environmentally sound and sustainable development. […]
> 29.5 Governments, business and industry should promote the active participation of workers and their trade unions in decisions on the design, implementation, and evaluation of national and international policies and programmes on environment and development.[48]

Interestingly for the purposes of linking this review more closely to the theme of forests, it is worth noting that UNCED also led to the adoption of the Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, also known as the Forest Principles, which reiterated much of these participatory elements in a more specific, normative, context:

> Governments should promote and provide opportunities for the participation of interested parties, including local communities and indigenous people, industries, labour, non-governmental organizations and individuals, forest dwellers and women, in the development, implementation and planning of national forest policies.[49]

There are some interesting participatory developments within two post-Rio processes: the Aarhus Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matters[50] and the United Nations Forum on Forests (UNFF). The Aarhus Convention came into force in 2001, and is directly related to *Agenda 21* and Principle 10 of the Rio Declaration.[51] In its case, however, participation in decision-making and access to justice is confined almost exclusively to the resolution of conflicts around access to, and provision of, information and similar issues. The Convention does not go much beyond existing agreements. The citizen remains an external party accorded a certain set of rights and participation does not extend to an active role in decision-making, marking to some extent a retreat from the more inclusive language of *Agenda 21*, demonstrat-

48 *Ibid.*, at 230 and 235.

49 Principle/Element 2(d), Non-legally Binding Authoritative Statement of Principles for a Global Consensus on the Management, Conservation and Sustainable Development of all Types of Forests, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. III), www.un.org/documents/ga/conf151/aconf15126-3annex3.htm.

50 Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters, Aarhus, 25 June 1998, in force 30 October 2001, 38 *International Legal Materials* (1999) 517, www.unece.org/env/pp/documents/cep43e.pdf.

51 Declaration of the United Nations Conference on Environment and Development, Rio de Janeiro, 3-14 June 1992, UN Doc. A/CONF.151/26 (Vol. I), www.un.org/documents/ga/conf151/aconf15126-1annex1.htm.

ing that the tensions between passive and active involvement in environmental decision-making remain unresolved.

It is worth exploring the UNFF process to gain some relevant anecdotal insight into how UN-initiated environmental processes implement the policy decisions of the General Assembly. The Commission for Sustainable Development (CSD) is the organ within the UN responsible for following the implementation of *Agenda 21*. As forests are one of the issues dealt with by *Agenda 21,*[52] since the Rio Conference, CSD has had a mandate to deal with forests. The CSD is a subsidiary organ of the Economic and Social Council (ECOSOC) of the UN and whatever substantive decisions it makes, usually in the form of draft resolutions, are sent to ECOSOC for final approval. Initially, post-Rio, it was felt that there was a need for a specific body to tackle the forest issue; this was the Intergovernmental Panel on Forests (IPF), which functioned from 1995-97 to 'provide a forum for forest policy decisions.'[53] In 1997 ECOSOC established the Intergovernmental Forum on Forests, which ran until 2000. Both IPF and later IFF were formed as subsidiary bodies to CSD, with reports and decisions being submitted to CSD, and subsequently to ECOSOC. In 2000, IFF4 submitted a final report suggesting that forests were in need of a more independent organ, not linked to CSD. Negotiations were held to develop a draft resolution, which was submitted to ECOSOC. This was approved[54] creating another new international arrangement on forests whereby a third body, the UNFF, was created as a subsidiary organ of ECOSOC itself, at the same level as CSD. The previous arrangement of CSD approving IPF and IFF reports before submitting them to ECOSOC as the final decision decision-making body changed with the creation of UNFF, which reports directly to ECOSOC.[55] There are differences and similarities between CSD and UNFF. Both are subsidiary organs of ECOSOC, but UNFF has universal membership (all the member States of the United Nations are members of UNFF) whilst CSD has limited membership. CSD still has the mandate to follow the implementation of *Agenda 21* but forest issues will not now be discussed by the Commission until its work cycle of years 2012/2013.[56] Whether these changes in institutional arrangements will benefit forests remains to be seen.

52 Chapter 11, Combating Deforestation, *Agenda 21*, *supra* note 26.

53 See www.un.org/esa/forests/faq.html.

54 Report of the fourth session of the Intergovernmental Forum on Forests, ECOSOC Resolution 2000/35, 18 October 2000, www.un.org/documents/ecosoc/dec/2000/edec2000-inf2-add3.pdf.

55 For a more detailed account of the UNFF process, see the paper by Pekka Patosaari in the present Review.

56 The author is indebted to Barbara Tavora-Jainchill, Programme Officer, United Nations Forum on Forests, United Nations Department of Economic and Social Affairs, for her assistance in clarifying the structural arrangements contained in this section.

It is worth noting that IPF generated a number of Proposals for Action.[57] Of particular interest to the theme of this review is the proposal that acknowledges the importance of developing certification and labelling programmes for forest products, which should include '[p]articipation that seeks to involve all interested parties, including local communities'.[58] Here it is possible to see an expansion of the role of the citizen beyond that outlined in the legislation explored earlier in this section, according her/him an active role in the development of market-based regulatory initiatives. Interestingly, in the context of the material on market-based activities and timber certification, which shall be explored below, two sections also refer specifically to both timber bans and boycotts, urging that they cease.[59] UNFF has also developed a multi-stakeholder dialogue and participatory process for non-state actors, who may attend sessions as part of national delegations. Travel for funding is not provided[60] whilst the wording in the document submitted to ECOSOC regarding non-state participation is quite precise:

> *Decides* to establish the United Nations Forum on Forests as a subsidiary body of the Economic and Social Council composed of all States Members of the United Nations and States members of the specialized agencies with full and equal participation, including voting rights, with the following working modalities:
> (a) The United Nations Forum on Forests should be open to all States and operate in a transparent and participatory manner. Relevant international and regional organizations, including regional economic integration organizations, institutions and instruments, as well as major groups, as identified in the Agenda 21, should also be involved.[61]

However, the provisions and obligations on the states themselves as to how they select non-state participants, and the role they are accorded, are not specified. Previous NGO reports had been critical of the extent to which nation states allowed non-state participation in both domestic implementation of, and participation in, forest policy development.[62]

Beyond hard law: NGOs and environmental regulation via the market place

NGOs and other non-state players are not just participating in global environmental decision-making processes within, or inspired by, the UN, nor can their

57 Department of Economic and Social Affairs/Secretariat of the United Nations Forum on Forests, *United Nations Forum on Forests. Global Partnership: For Forests For People* Fact Sheet 1 (2004), www.un.org/esa/forests/pdf/factsheet.pdf.

58 Proposal 133(c)(v), IPF Proposals for Action, www.un.org/esa/forests/pdf/ipf-iff-proposalsforaction.pdf.

59 Proposal 130(b), IPF Proposals for Action, ***ibid***.

60 See www.un.org/esa/forests/faq.html.

61 Article 4, ECOSOC Resolution 2000/35, ***supra*** note 54.

62 H. Verolme et al., *Keeping the Promise? A review by NGOs and IPOs of the implementation of the UN IPF Proposals for Action in select countries* (Biodiversity Action Network, Global Forest Policy Project: Washington, D.C., 2000).

increasing global role be attributed solely to their roles within UN institutions. Courville attributes the growth of the NGO sector to the rise of globalization itself, the erosion of the welfare state, trade liberalization and privatization. She argues that this has been 'instrumental in shifting economic power from the national to the international level, from states to other actors'[63] and she includes corporations and civil society protagonists in this list of players.

Ruggie presents the historical rise of civil society as a result of what he terms embedded liberalism, by which he means a process whereby 'the capitalist countries learned to reconcile the efficiency of markets with the values of social community that markets themselves require in order to survive and thrive.'[64] The globalization of financial markets and production chains threatens to undermine the nation-based social contract, necessitating the development of globally embedded shared social values and institutions. Whilst organizations such as the United Nations are seeking to develop a similar social contract on the global level through various initiatives (Ruggie uses the Global Compact as an example), embedding global markets within shared social values faces a number of problems not faced by the nation state, particularly the lack of a global government as well as institutions that are strong enough to compensate for this absence. He argues that emergent social processes and movements are a response and that trigger more inclusive forms of global governance. They compensate for this lack of government and are based on the 'dynamic interplay between civil society, business and public sector over the issue of corporate social responsibility.'[65]

Held et al. argue that sovereignty, state power and territoriality stand today in a more complex relationship than in the epoch during which the modern nation state was being forged. Globalization is associated not only with a new sovereignty regime but also with the emergence of powerful new non-territorial forms of economic and political organization in the global domain, such as multinational corporations, transnational social movements, international regulatory agencies, etc. In this sense, the world order can no longer be conceived as purely state-centric or even primarily state-governed, as authority has become increasingly diffused among public and private agencies at the local, national, regional and global levels.[66] Held et al. also argue that for many of those studying the phenomenon of globalization 'the sheer density and scale of contemporary economic, social and political activity appear to make territorial forms of politics increasingly impotent', which in turn poses the question as to whether sovereignty is being 'displaced by

63 S. Courville, 'Understanding NGO-Based Social and Environmental Regulatory Systems: Why We Need New Models of Accountability', in C. Dowdle (ed.), *Rethinking Public Accountability* (Cambridge University Press, 2005) at 1.

64 Ruggie, 'Taking Embedded Liberalism Global', *supra* note 28, at 1.

65 *Ibid*., at 2-3.

66 D. Held et al., *Global transformations*, *supra* note 29, at 9.

forms of independent and/or "higher" legal or juridical authority which curtail the rightful basis of decision-making within a national polity.'[67] The globalization of politics has led to a commensurate growth of global governance, which is not solely represented within formal institutions and organizations for intergovernmental co-operation such as the United Nations and the World Trade Organization, but also within multinational corporations, transnational social movements and a multitude of non-governmental organizations. These latter all pursue global objectives 'which have a bearing on transnational rule and authority systems'[68] resulting in international regimes around which the relevant actors converge and through which they pursue international relations.

> They constitute forms of global governance, distinct from traditional notions of government conceived in terms of specific sites of sovereign political power. In the contemporary international system there is, of course, no single political authority above the state. But despite this, international regulatory regimes have developed rapidly, reflecting the patterns of global and regional enmeshment.[69]

The authors point to the growth of international non-governmental organizations from 176 in 1909 to 5,472 in 1996 to emphasize this point. This combination of international regimes and associated actors has spilled over into the nation state, which is taking up international legislation nationally, whilst non-state actors infiltrate areas of traditional state autonomy by 'organizing people and coordinating resources, information and sites of power across national borders for political, cultural purposes.'[70] Keck and Sikkink comment that environmental NGOs have grown the most dramatically of all the social change organizations and in combination with human rights and women's rights movements represent over half the NGOs involved in social change.[71]

The challenge for NGOs, according to Birnie, is that since 'assumptions that free market benefits social welfare and results in socially acceptable levels of consumption has been proved palpably wrong […] the problem now is how to use both market forces and regulatory mechanisms in optimal combination to achieve sustainable development.'[72] Haufler appears to support this assertion, arguing that self-regulation represents a new form of global governance, which she defines as 'mechanisms to reach collective decisions about transnational problems with or without government participation.'[73] However, she maintains that the UN still re-

67 *Ibid.*, at 29.

68 *Ibid.*, at 49-51.

69 *Ibid.*, at 51.

70 *Ibid.*, at 53-57.

71 M.E. Keck and K. Sikkink, *Activists Beyond Borders: Advocacy networks in international politics* (Cornell University Press: New York, 1998) at 10-12.

72 Birnie, 'The UN and the Environment', *supra* note 23, at 361.

73 Haufler, *A Public Role for the Private Sector*, *supra* note 30, at 1.

mains largely responsible for the development of private sector governance via a growing number of international institutions, particularly those that have either arisen within the UN, or via UN-sponsored initiatives, such as the Voluntary Code of Conduct on Transnational Corporations.[74] She links the rise of industry regulation through environmental codes, management systems and programmes to the post-UNCED context of *Agenda 21*, which sought to promote cleaner production and, in the words of UNCED, responsible entrepreneurship. Courville sees that since NGOs now wield significant power in their own right, concerns have arisen regarding their level of accountability and she implies a connection between the need to demonstrate accountability and the increasing efforts by NGOs to develop and codify certification initiatives.[75] She argues that such certification organizations are a structural solution to accusations of conflict of interest, essentially keeping at bay criticisms that arise from 'a democracy deficit caused by the dispersed nature of decision-making across international borders.'[76]

Ruggie attributes the rise of market-driven regulation 'to a range of factors, but above all [to] the sensitivity of their corporate brands to consumer attitudes.'[77] He identifies three phases of regulatory development: an initial wave that consisted largely of unilateral company codes, designed to demonstrate good conduct and not generally for public disclosure but intended to address industrialized consumers' concerns (such as child labour) but not deeper issues such as freedom of association. This was followed by the combination of social and financial reporting in order to demonstrate a company's commitments to its shareholders. Third, sector-wide certification arrangements, involving several businesses and/or associations, and including civil society participants were developed.[78]

For Ruggie, however, while these voluntary initiatives demonstrate great progress, they only represent a fraction of global business. Their significance lies rather in their second-order impacts, such as the stimulation of socially responsible investment, the promotion of the rights of labour in the face of diminishing national standards, and particularly the creation of business as an advocate for a more effective global public sector. Furthermore, there is a potential for these kinds of soft law to become hard law at some later time and by coming in on the ground floor, companies can gain advantages over others that join once standards have been set. He identifies certification institutions as 'an addition to the traditional machinery

74 *Ibid.*, at 13-15.

75 Courville, 'Understanding NGO-Based Social and Environmental Regulatory Systems', ***supra*** note 63, at 1-6.

76 *Ibid.*, at 2.

77 Ruggie, 'Taking Embedded Liberalism Global', ***supra*** note 28, at 17.

78 *Ibid.*, at 17-19.

of interstate governance'[79] and sees them as becoming an important element of global regulation, providing a partial solution but one that as it develops will offer the public sector an opportunity to assert itself back into globalization.

Cashore et al. focus specifically on forest management certification programmes and argue that they 'ushered in a new breed of sustainable development institutions outside of traditional government processes that would offer fundamentally different ways of creating policy and implementing policy choices.'[80] They refer to these systems as non-state market driven and argue that they are a departure from traditional models of state-centred sovereign authority, in that their authority is derived from companies along the forest product supply chain voluntarily choosing to adopt private governance systems. These systems are influenced by a range of non-state players, particularly environmental NGOs, who influence companies to choose one particular supply chain over another by offering market access or premiums through their support of one system over another, or via public and market campaigns to encourage them to support certification. Private governance systems may also improve environmental performance across the board in ways that traditional public command and compliance models have not. The extent to which such systems will succeed depends on the extent to which they can institutionalize themselves in developing nations and actually address global forest deterioration. Forest management-related governance systems have arisen within the context of increasing numbers of market-oriented governance institutions created to meet the concerns of global civil society around the negative impacts of globalization. They can also be seen as an attempt to reverse the downward trend, and were initially focussed around boycotts and similar actions to force governmental and corporate interests into an upward trend in the form of voluntary compliance market mechanisms aimed at domestic markets. These developments coincided with increased civil society demands at a time of reduced government spending, which sponsored a form of international liberal environmentalism seeking to avoid command-and-control responses and traditional business versus environment approaches. This also occurred in a period during which intense scrutiny was being paid to tropical forest destruction. A further significant contemporaneous event was the Rio Earth Summit, which created a policy environment that favoured private sector initiatives. In the case of business this followed a route of voluntary self-regulation programmes and, for environmental groups, certification institutions.[81] Cashore et al. conclude that non-state systems mark a radical departure from the traditional sovereign authority model of public policy and that relations between the two approaches are complex and hinge on both domestic and international conditions. The authors assert that non-state market-driven systems 'rep-

79 *Ibid.*, at 18-27.

80 Cashore, Auld and Newsom, *Governing Through Markets*, *supra* note 31, at 4.

81 *Ibid.*, at 4-11.

resent a grand new experiment in developing rules and procedures in ways quite foreign to traditional public policy approaches.'[82]

Two approaches to environmental certification: ISO 14000 and the Forest Stewardship Council

For Haufler, the proliferation and success of social and environmental pressure groups has forced big business to defend its reputation and avoid further risk by creating – either independently, or in co-operation with state and non-state actors – a range of organizations such as the World Business Council for Sustainable Development. These organizations have developed numerous voluntary programmes that report on, account for and, in some cases, certify corporate activities under a range of social, economic and environmental criteria.[83] In the forest sector, she identifies two strands of regulatory approaches post-*Agenda 21*. The first is an industry-dominated, technocratic, environmental management-system approach across industrialized and industrializing nations, exemplified by the International Standardization Organization 14000 (environmental management) series. The second approach is a contemporary programmatic approach to environmental regulation exemplified by initiatives created in partnership with NGOs and international organizations. Haufler cites the Forest Stewardship Council, 'a non-profit organization founded in 1993 through negotiations among multiple stakeholders, including the timber industry'[84] as an example. Ruggie also considers the latter approach to be the most transparent and also points to the Forest Stewardship Council as one such example.[85] Cashore, et al. point out that in the case of voluntary certification, civil society, particularly NGOs, is voting with its feet and whilst it may not be asserting that traditional public policy approaches should be ignored, it appears that in the context of forestry at least, 'FSC-style private authority is at present providing what they believe to be more opportunities for access to and influence over sustainable forestry management standards.'[86]

Forest certification has become the subject of numerous studies and a specific commentary on all its aspects cannot be undertaken here.[87] At this point it is important to stress, however, that the approaches taken by ISO 14000 and FSC are quite different, and a comparison is therefore not one of like with like, the former being clearly based on a company-level approach, the latter looking at operations on the forest floor. This distinction is sometimes referred to as a systems-based versus

82 *Ibid*., at 243-247.

83 Haufler, *A Public Role for the Private Sector*, *supra* note 30, at 20-28.

84 *Ibid*., at 31-38.

85 Ruggie, 'Taking Embedded Liberalism Global', ***supra*** note 28, at 24-25.

86 Cashore, Auld and Newsom, ***Governing Through Markets***, ***supra*** note 31, at 244.

87 See, for example, K. Vogt et al., *Forest Certification: Roots, issues, challenges and benefits* (CRC Press: London, 1999); R. Nussbaum and M. Simula, *Forest Certification Handbook* (2nd ed., James & James/Earthscan: London, 2005).

performance-based approach.[88] Furthermore, lack of space does not permit examining the broader governance structures of the two organizations, except to comment briefly that they are also quite different. On an international level, the former concentrates decision-making and representational powers within the nation state through standards bodies, and member organizations participate in a General Assembly. The FSC in turn has a multi-stakeholder structure of three chambers representing environmental, social and economic interests, with equal voting rights. On a national level, ISO's member organizations vary in the extent to which non-state players are involved in the development of national standards and decision-making, whilst the FSC replicates the chamber concept through national or regional initiatives and, where these are absent, through multi-stakeholder consultations. These consultations are undertaken as part of the process carried out by certifiers to assess a company's eligibility for certification against generic standards adapted regionally and consistent with the FSC's ten principles and criteria.[89] Both approaches are not without their critics.[90] In terms of global market penetration, anecdotal evidence suggests that as of April 2005 approximately 88,000 companies had been certified under the 14001 standard.[91] In terms of FSC certification, as of December 2005 nearly 4,500 forest management certificates had been issued.

Hortensius argues that *Agenda 21* and the Rio Forest Principles resulted in the development of a number of certification programmes and related standards, including the ISO 14000 series, although he also traces the programme's conceptual origins to the ISO's 9000 series (quality management).[92] While both focus on a company's management activities, the ISO 14000 series looks more specifically at those aspects of a company's activities that relate to the environment. Hortensius emphasizes the value of companies pursuing the series because by doing so they do not interfere with the environmental legislative and regulatory arrangements of the nation state, and because the 14000 series' standards are restricted to providing a framework under which a company systematizes its own internal environmental

88 See, for example, S. Ozinga, ***Footprints in the Forest: Current practice and future trends in forest certification*** (FERN: Moreton in Marsh, 2004) at 10, www.ecotimber.com/reports_downloads/Footprints.pdf.

89 P. Hauselmann, *ISO inside out: ISO and environmental management* (WWF International: Gland, 1997) at 4; Ozinga, ***Footprints in the Forest***, *supra* note 88, at 46.

90 For ISO see, for example, M. Morikawa and J. Morrison, *Who Develops ISO Standards? A Survey of Participation in ISO's International Standards Development Processes* (Pacific Institute: Oakland, 2004); S. Oberthür et al., *Participation of Non-Governmental Organizations in International Environmental Governance: Legal Basis and Practical Experience* (Ecologic: Berlin, 2002). For the FSC see, for example, S. Ozinga, ***Footprints in the Forest***, *supra* note 88, at 21 and 46-49; S. Counsell and K. Loraas (eds.), *Trading in Credibility: The Myth and Reality of the Forest Stewardship Council* (Rainforest Foundation: London, 2002).

91 See, for example, www.ecology.or.jp/isoworld/english/analy14k.htm.

92 D. Hortensius, 'ISO 14000 and Forestry Management: ISO develops 'bridging' document', ***ISO 9000-ISO 14000 NEWS***, 4/1999 at 12-20. At the time of writing his article, D. Hortensius was senior standardization consultant with the Netherlands Standardization Institute and closely involved in the development of the ISO 14000 series.

management priorities and do not specify absolute environmental performance requirements.[93] At the same time, however, he also acknowledges certification of forest management 'as an alternative to governmental regulation or in addition to them.'[94] He considers the FSC system as one of the most widely-known systems of certification of 'sustainable forest management',[95] a concept which is built on principles and criteria. However, Hortensius distinguishes between schemes that have been developed as a result of various post-Rio intergovernmental processes such as the Montreal[96] and Helsinki processes, and exemplified in the market by such schemes as that of the Canadian Standards Association and those that he terms non-governmental, which he typifies by citing the Forest Stewardship Council model.[97] He comments that the 14000 series and FSC approaches have been seen to be 'mutually exclusive or even being in opposition to each other'[98] and characterizes the publication of the 14 061 technical report, a term used for documents of an informational nature only, as a bridging mechanism for forest managers to apply principles and criteria of sustainable forest management to the management-systems approach of 14001, and other 14000 standards.[99]

Cashore, et al. provide a slightly differing perspective on the origins of certification and the FSC in particular, arguing that it was the failure of the Rio Summit to agree on a global forest convention that created an environment favouring the development of private sector initiatives. They imply that the FSC's multi-stakeholder structure was designed to avoid dominance in policy-making by any single interest as a direct result of concerns that the failed Rio forest convention would not be able to deliver equal participation. The FSC model was soon followed by forest industry and landowner programmes in markets where the FSC was most active, but with their several differences reinforcing the contention that industry oriented models would be less participatory, more discretionary and narrower in focus than civil society certification programmes. FSC competitors initially sought to develop models in which industry would strongly shape these non-state market driven governance systems, and left the NGO sector to act in an advisory and consultative capacity, emphasizing the industry contention that civil society perceptions of management practices were unwarranted and what was

93 *Ibid.*, at 12-14.

94 *Ibid.*, at 13.

95 *Ibid.*, at 12.

96 The Montreal Process Criteria are: 1) Conservation of biological diversity; 2) Maintenance of productive capacity of forest ecosystems; 3) Maintenance of forest ecosystem health and vitality; 4) Conservation and maintenance of soil and water resources; 5) Maintenance of forest contribution to global carbon cycles; 6) Maintenance and enhancement of long-term multiple socio-economic benefits to meet the needs of societies; 7) Legal, institutional and economic framework for forest conservation and sustainable management. See www.mpci.org/.

97 Hortensius, 'ISO 14000 and Forestry Management', *supra* note 92, at 12-14.

98 *Ibid.*, at 19.

99 *Ibid.*, at 16-20.

needed were certification systems that allowed companies to "educate" civil society. There are consequently some significant differences between the FSC model and its competitors, perhaps the most important of which for this study is the reliance of industry-oriented models on a national territorial focus.[100] In terms of process, FSC certification is undertaken at the forest level, with a certifier conducting an audit of existing operations determining their conformity to FSC standards. Certificates may be issued with conditions or corrective action requests, which require remedial action over a given timeframe.[101]

Of particular relevance to the present exploration of non-state involvement in decision-making, it is worth exploring the nature of participation in the process of certification of forest management in these two systems. With the 14000 series it is important to remember that, according to Hortensius, it is the companies themselves that determine the extent of their own management objectives, as 'ISO does not establish absolute environmental performance requirements.'[102] It does, however, set three general requirements: compliance with relevant legislation and regulations; continual improvement in overall environmental performance; prevention of pollution.[103] In terms of forest management, Hortensius indicates that a company can consider linking its objectives to principles and criteria for SFM[104] but the decision of which system – based on intergovernmental or non-governmental agreements – a company adopts, if it adopts one at all, is their own. Having said this, Hortensius does also indicate that, 'the views of interested parties have to be considered when establishing environmental objectives.' How this is implemented, at least according to Hortensius, appears vague, as he refers to both the possibility for forest managers to use SFM processes to develop a so-called public participation process or to fulfil the ISO 14001 requirement to consider views of interested parties by organizing a public consultation process. Furthermore, the development of specific performance targets is the responsibility of the company itself.[105] All of this taken together may result in a rather limited manner in which stakeholders can shape management activities and a rather limited scope under which they can have input.

As commented above, assessment of a forest manager's eligibility for certification is undertaken by a certification body accredited to the FSC which grants certifica-

100 Cashore, Auld and Newsom, *Governing Through Markets*, *supra* note 31, at 10-16.
101 Ozinga, *Footprints in the Forest*, *supra* note 88, at 48.
102 Hortensius, 'ISO 14000 and Forestry Management', *supra* note 92, at 15.
103 *Ibid.*, at 14.
104 *Ibid.*, at 16.
105 *Ibid.*, at 18.

tion if the FSC's ten principles and criteria are met.[106] Of these principles and criteria a number can be deemed to relate directly to aspects of stakeholder participation in operational issues: resolution of disputes over tenure claims and rights;[107] consent and compensation of indigenous peoples for use and management of forest resources on traditional lands;[108] consultation of people and groups directly affected by management operations;[109] and conflict resolution and compensation regarding loss or damage affecting legal or customary rights, property, resources or livelihoods of local people.[110] An FSC standards document, *Stakeholder consultation for forest evaluation*,[111] also provides details as to how certifiers should undertake consultations during full assessment, whilst also providing the requirements for consultation during pre-evaluation, i.e. before a forest manager determines to go through full certification assessment. Whilst this can be seen as providing more specific guidance, it is still restricted to giving stakeholders a role in certification assessments only within the confines of determining a forest manager's compliance with the FSC's principles and criteria. This again could be seen to limit the manner in which stakeholders can shape management activities and the scope under which they can have input.

Setting aside the larger issue of how interested parties are involved in the governance structures of both ISO and FSC and the broader standards development processes, which as indicated above differ in both systems and need to be analyzed further to fully identify their respective strengths and weaknesses, it could be concluded that the extent of participation in decision-making concerning forest management does not move much beyond the consultation rung on Arnstein's ladder. It certainly does not encompass partnership, delegated power or citizen control in forest management decision-making. In both types of decision-making (systems and performance related), it could be concluded that participation is restricted to the provision of information, a fairly passive form of consultation. There is clearly a need for more active and wide-reaching involvement of stakeholders beyond the forest managers themselves.

106 The ten Forest Stewardship Principles are: 1) Compliance with laws and FSC Principles; 2) Tenure and use rights and responsibilities; 3) Indigenous peoples' rights; 4) Community relations and workers' rights; 5) Benefits from the forest; 6) Environmental impact; 7) Management plan; 8) Monitoring and assessment; 9) Maintenance of high conservation value forests; 10) Plantations. See www.fsc.org.

107 Principle 2.3, FSC Principles.

108 Principle 3.4, FSC Principles.

109 Principle 4.4, FSC Principles.

110 Principle 4.5, FSC Principles.

111 Forest Stewardship Council, *Stakeholder Consultation for Forest Evaluation*, 30 November 2004, FSC-STD-20-006,www.fsc.org/keepout/en/content_areas/77/103/files/FSC_STD_20_006_Stakeholder_consultation_for_forest_evaluation_V2_1.PDF.

Conclusions

No analysis of participation is complete without at least some understanding of the nature of power, and the extent to which its exercise affects the way non-state actors are involved in decision-making. The ability for a participant to ascertain the extent to which he/she has control in any given decision-making process might provide a useful measure in determining whether participation will deliver an outcome that meets the needs of the participant. Understanding the extent of participation may even serve as a surrogate for determining a process's social, environmental and economic acceptability, one might even say sustainability. How can a process be sustainable if substantive contributions from a range of perspectives are excluded from the decisions made? In some cases, refusing to participate could be more productive than taking part. Second, genuine discourse and therefore negotiations are likely to be hampered if there is no clear understanding or acceptance amongst all participants of the constraints of institutional structures. Moreover, an understanding as to what these institutional structures are supposed to deliver is needed, as are steps to ensure that participation within those structures is equal amongst those involved.

The UN and its offshoots have played a significant role in shaping the nature of international, and national, environmental agreements. There is a historical relationship between such UN initiatives and the institutional, legal and regulatory arrangements undertaken at the nation state level to implement decisions made. This is today combined with the growing contribution of the NGO and other sectors to the discourse around sustainable development, and the growth of various supranational environmental agreements. The effectiveness of non-state participation has been limited by various institutional constraints, both structural and fiscal, and by institutional ambiguities, both between developed and less developed nations and between nation states and non-state actors. The UN has undoubtedly contributed significantly to the creation of a space for dialogue between state and non-state actors and this has had consequences that go beyond the various action-related agendas of the UN bodies themselves. Just as significant, however, is the response of industry to this growth in participation and the convergence of state and non-state interests around private sector and civil society initiatives for sustainable development. Also of importance is the development of private, voluntary regulatory frameworks, which focus around various forms of public monitoring, assessment, verification and reporting of corporate environmental, social and economic activities. These are exemplified by a growing number of certification schemes, which independently verify the claims made by business interests about their activities. These range from systems-based approaches to environmental management, such as the ISO 14000 Series in which the state has more decision-making powers than non-state interests (especially NGOs), to performance-based programmes such as the Forest Stewardship Council, in which the role of civil

society in decision-making is more pronounced. However, in all of these systems, we can see a marked growth in the cross-sectoral discourse that surrounds environmental diplomacy and law-making, and a validation of participatory decision-making.

Despite the views of some commentators, the UN remains one of the most influential international institutions for decision-making around environmental governance. However, its own internal shortcomings, particularly the tensions between North and South, and resource exploitation versus resource conservation, have hampered its effectiveness. These tensions are partly explained both by the fact that the UN is largely beholden to the political agendas of its member states, who can be hostile to the environment, and internal factionalism around conflicting programmes that reflect the exploitation/conservation dichotomy, which has only partially been resolved through the concept of sustainable development. From a research perspective, the UN provides an ideal institution against which some of the theories associated with participation discussed in this paper could be explored. The themes identified in this paper clearly point to the need for the development of a set of principles, criteria and indicators that outline the requirements for effective discourse around environmental decision-making. Such principles could form the basis for incorporating participatory governance around local, national and international environmental law and treaty negotiations. This area requires further research, which would have the potential to make an effective contribution towards increasing the effectiveness of environmental decision-making.

The United Nations Decade of Education for Sustainable Development (2005-2014)[1]

Akpezi Ogbuigwe[2]

Background

Ever since the publication of Rachel Carson's revolutionary book, *Silent Spring*,[3] on the effects of insecticides and pesticides on songbird populations throughout the United States, man has grappled with ways to harmoniously interact with the environment. This is evident through several programmes, special days and other schemes, such as Earth Day in 1970, the United Nations Conference on the Human Environment in 1972, the Rio Conference in 1992, the Millennium Summit in 2000 and the World Summit on Sustainable Development (WSSD) in 2002. In spite of all these agendas, the general consensus at the WSSD in Johannesburg was that achievement of sustainable development was too slow for the overwhelming majority of humankind. It was evident that there was a need for a type of education that would empower this generation of humankind to manage their environment in a more sustainable way, resulting in eradication of poverty, the equitable use of resources and sustainable livelihoods for present and future generations. The Decade of Education for Sustainable Development was conceived to meet this need.

At its 57th Session in December 2002, the United Nations General Assembly, following the recommendation found in the WSSD *Plan of Implementation*,[4] declared the decade 2005-2014 the United Nations Decade of Education for Sustainable De-

1 This paper is based on a lecture given by the author on 26 August 2005.

2 Head, Environmental Education and Training, UNEP.

3 Rachel Carson, *Silent Spring* (Hamish Hamilton: London, 1962).

4 World Summit on Sustainable Development, *Johannesburg Plan of Implementation*, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm.

velopment (UNDESD).[5] The General Assembly designated UNESCO as the lead agency to promote and ensure the achievement of the goals set for the decade. UNDESD is a crystallization of the consensus among the international community that education is fundamental to the achievement of sustainable development. Education was given a prominent role in the Stockholm Conference's *Plan of Action* for addressing global environmental challenges. However, the central role of education was given particular prominence at the Rio Conference. Chapter 36 of *Agenda 21* states that 'Education, raising of public awareness and training are linked to virtually all areas in *Agenda 21*, and even more closely to the ones on meeting basic needs, capacity-building, data and information, science, and the role of major groups.'[6] Chapter 36 drew its principles from the Declaration and Recommendations of the Tbilisi Intergovernmental Conference on Environmental Education organized by UNESCO and UNEP in 1977. The UNESCO sponsored Jomtien World Conference on Education for All (1990), the UN Millennium Development Goals (MDGs),[7] the Dakar Framework for Action (2000)[8] and the NEPAD Environment Initiative (2001) are just some other examples of the international consensus on the central role of education for sustainable development.

Sustainable Development

Sustainable development is, by itself, a complex concept to define. The concept became popular after it was defined by the World Commission on Environment and Development, also known as the Brundtland Commission, in its report *Our Common Future*, as 'development that meets the needs of the present without compromising the ability of future generations to meet their own needs.'[9] In 1991, United Nations Environment Programme (UNEP), the World Conservation Union (IUCN) and the World Wildlife Fund (WWF) published a document entitled *Caring for the Earth: A Strategy for Sustainable Living*.[10] In this document sustainable development was defined as 'improving the quality of human life while living within the carrying capacity of supporting ecosystems.'[11] The concept of sustainable development is continually evolving, but primarily it deals with a careful balancing of environ-

5 United Nations Decade of Education for Sustainable Development, GA Res. 57/254, 20 December 2002.

6 Chapter 36, *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm.

7 For more information on the Millennium Development Goals see www.un.org/millenniumgoals/.

8 World Education Forum, Dakar Framework for Action, Education for All: Meeting our Collective Commitments, Dakar, 26-28 April 2000, www.unesco.org/education/efa/ed_for_all/dakfram_eng.shtml.

9 World Commission on Environment and Development (WCED), *Our Common Future* (Oxford University Press, 1987), UN Doc. A/42/47 (1987)(The Brundtland Report), at 43.

10 IUCN, UNEP, WWF, *Caring for the Earth: A Strategy for sustainable living* (IUCN: Gland, 1991).

11 Box 1, Sustainability: a question of definition, *ibid.*, at 10.

mental, social and economic issues with culture, values and respect playing an underlying role at all of these levels, in the pursuit of development and an improved quality of life.

Why Education?

The focus on education for sustainable development is important because education is essential in allowing people to make informed and wise choices. The bulk of a nation's future leaders shape their ideology and beliefs from the kind of education they receive. Aside from the word government, education appears more often than any other term in the Rio Conference's comprehensive plan for global sustainability.[12] A vigorous education is vital if a sustainable lifestyle is to become a reality. Although there is a general consensus on the relevance of education for sustainable development, there is no universal definition or model of what education for sustainable development is.[13] While from a theoretical point of view this may prove problematic, this in itself is not a disadvantage as it allows for education for sustainable development to be tailored to meet the peculiarities and demands of local circumstances. Chapter 36 of *Agenda 21* identifies four main focal areas of education for sustainable development. These are promoting access to and improvement of the quality of basic education, reorienting education towards sustainable development, increasing public awareness and promoting training. Education for sustainable development therefore 'is a dynamic concept that utilizes all aspects of public awareness, education and training to enhance an understanding of the linkages among issues of sustainable development and to develop the knowledge, skills, perspectives and values which will empower people of all ages to assume responsibility for creating and enjoying a sustainable future.'[14]

The Stockholm Conference highlighted that environmental and development problems are closely linked to people's decisions and actions.[15] Education is crucial in addressing this. As *Agenda 21* states,

12 Rosalyn McKeown, *Education for Sustainable Development Toolkit* (2nd version, University of Tennessee: Knoxville, 2002), www.esdtoolkit.org/default.htm.

13 See D. de Rebello, 'What is the role for Higher Education Institutions in the UN Decade of Education for Sustainable Development?', paper delivered at the International Conference on Education for a Sustainable Future: Shaping the Practical Role of Higher Education for Sustainable Development, held at Charles University, Karolinum, Prague, Czech Republic, 10-11 September, 2003, at 4. See also R. McKeown, *Toolkit*, *supra* note 12, at 13.

14 See D. de Rebello, 'Role for Higher Education Institutions', *supra* note 13, at 4.

15 See Preamble, Declaration of the United Nations Conference on the Human Environment, Stockholm, 16 June 1972, 11 *International Legal Materials* (1972) 1416, www.unep.org/Documents/Default.asp?DocumentID=97&ArticleID=1503.

> Both formal and non-formal education are indispensable to changing people's attitudes so that they have the capacity to assess and address their sustainable development concerns. It is also critical for achieving environmental and ethical awareness, values and attitudes, skills and behaviour consistent with sustainable development and for effective public participation in decision-making.[16]

Education and training play an important role in enabling the integration of the principles of sustainable development into international, national and local policies and programmes for the environment. They also influence how the three pillars of sustainable development are understood and implemented. This requires a reorientation of education systems, policies and practices to provide citizens with the appropriate knowledge, skills and ethical commitment to engage critically in decision-making and action on current and emerging environmental and development problems. Consequently, education not only encourages environmental conservation but also plays a significant role in social and economic aspects, particularly with respect to capacity-building for poverty alleviation, human rights and peace through appropriate development.[17]

The United Nations Decade of Education for Sustainable Development (UNDESD)

UNDESD is a decade set aside by the United Nations to educate, inform and encourage humans to, amongst others, respect, value and preserve the achievements of the past; appreciate the wonders and peoples of the earth; live in a world where all people have sufficient food for a healthy and productive life; assess, care for and restore the state of our planet; create and enjoy a better, safer and more just world; be caring citizens who exercise their rights and responsibilities locally, nationally and globally and reorient all forms of education to sustainable development, i.e. knowledge, skills, perspectives, values and issues. The UNDESD is a decade to teach people to speak and live the language of sustainable development (SD).

Education for Sustainable Development (ESD) envisages a new approach to education in all spheres of life that will simultaneously protect the environment and provide for economic and personal well-being, which together form the foundation for human and global security. ESD seeks to contribute to enabling citizens to

16 Chapter 36.3, *Agenda 21*, *supra* note 6.

17 See further, Recommendations 2-4, Declaration of the Tbilisi Intergovernmental Conference on Environmental Education, 14-26 October 1977, unesdoc.unesco.org/images/0003/000327/032763eo.pdf.

face the challenges of the present and future and produce leaders who will make relevant decisions for a viable world.[18] In a simplified mathematical construct:

SD – ESD	=	Business as usual
SD + Education	=	Business unlimited / unsustainable consumption
SD + ESD	=	Business unusual, future guaranteed

People cannot be expected to deliver the kind of world one hopes for if one does not properly train or equip them for the task. An analogy can be made with placing a city person in charge of a farm, leaving him with instructions for how to care for the farm. Even if he is given the best "How to do it" book in the world, it will still pose a great challenge! The vision of UNDESD is not utopia, but an ideal to work towards by promoting and improving quality education, reorienting educational programmes, building public understanding and awareness and providing practical training for all sectors of the workforce and in all disciplines.[19]

It must be emphasized that ESD is not a separate field of study, but rather an interdisciplinary approach to understanding that is integrated across the curriculum and all disciplines. In this light, ESD should not be seen as a course for schools only, and should be applied across all fields including professional, corporate, political and continuous education programmes such as the Joensuu – UNEP Course on International Environmental Law-making and Diplomacy. It should aim to infuse SD across the full range of life-long learning: formal, informal, continuous and professional learning.

International Implementation Scheme (IIS)

To ensure the proper implementation and achievement of the objectives of UNDESD, UNESCO, with inputs from other stakeholders, prepared a framework for the International Implementation Scheme (IIS) and shared it worldwide. This yielded more than 2000 contributions to help improve the IIS. The draft scheme was then widely circulated and reviewed by academics and experts in the field before it was submitted in July 2004 to the High-Level Panel on the Decade. It was presented at the 59th Session of the United Nations General Assembly and then at the 171st and 172nd Sessions of the UNESCO Executive Board.[20] From this IIS, each region and country is formulating its own domestic scheme for the implementation of UNDESD. The IIS identifies UNEP as a key partner in defining and promoting the environmental perspectives of UNDESD.

18 See www.unesco.org/education/desd.

19 *Ibid.*

20 See Draft Consolidated International Implementation Scheme for the United Nations Decade of Education for Sustainable Development, 11 August 2005, UNESCO/172/EX/11, unesdoc.unesco.org/images/0014/001403/140372e.pdf .

UNEP and UNDESD

UNEP's mission is to provide leadership and encourage partnerships in caring for the environment by inspiring, informing and enabling nations and peoples to improve their quality of life without compromising that of future generations. This mission and UNEP's motto, Environment and Development, ties in perfectly with the concept of sustainable development. In order to ensure the attainment of this mission and in line with the goals of UNDESD, UNEP has formulated strategies for environmental education which include advocacy and promotion of environment education and training within the bigger picture of sustainable development; professional training for people working in various fields of environment training and practice; development of environmental education learning support materials and promoting the mainstreaming of environment and sustainable development issues in universities; promoting networking and partnerships in communities and regions to advance environment and sustainability education; research into environment and sustainability education and use of information and communication technology; ensuring easy access to environment information through mass media and public education; and raising students as agents of change in the field of environment and development. These strategies guide UNEP's programmes during this decade to ensure that emphasis is placed on the attainment of the goals of UNDESD which are also core to achieving UNEP's mission.[21]

Sustainable Development and Law-making, Negotiation and Diplomacy

Two parallel tools which have been advocated and used by the international community to promote the attainment of sustainable development are law and education. There are over 240 multilateral environmental agreements and many more are being negotiated daily. Unanswered questions remain, however. Whose interest is served by these agreements? How committed are signatories to the implementation of the agreements? One thing that is clear in the face of growing environmental insecurity, poverty and other world challenges is the fact that the myriad of challenges faced by the world community, and particularly developing countries, have yet to be adequately addressed. UNDESD, apart from affirming education as the key to the achievement of sustainable development, is also an indictment of the shortcomings of the kinds of laws, education, politics and policies which have been engaged in during over three decades of activity in addressing the environment and development challenges of the world. The declaration of a

21 See United Nations Environment Programme, UNEP Strategy for Environmental Education and Training – A Strategy for Action Planning for the Decade 2005-2014; United Nations Environment Programme, *UNEP Programmes and Resources for Environmental Education and Training: An Introductory Guide* (UNEP: Nairobi, 2004).

Decade of Education for Sustainable Development infers that the problem is not with education as a tool for achieving sustainable development but rather with the need for a reinforcement of education activities contents and perhaps for a rethink of the delivery methods that will equip people to make the right decisions on the negotiating table and in other spheres of life.

UNDESD is therefore a call and an opportunity to build upon the achievements of the past and address identified gaps in current approaches, values and actions. Negotiations and laws should reflect the varied responsibilities that each nation bears and how these can be equitably shared. With Education for Sustainable Development, people come to the negotiating table with a bigger picture and not just from narrow perspectives. This ensures better negotiations and eventually, better MEAs and laws. With ESD the environment will always win and when the environment wins, people win. The well-being of the environment is the well-being of man. ESD is crucial because human and global security, economic opportunities and the quality of life of humans and other species depend upon the continued availability of a life-sustaining environment.

Implications for Law-making, Negotiation and Diplomacy

As part of efforts to ensure the success of UNDESD, law-makers and diplomats should review existing laws related to the environment to determine if they are consistent with sustainable development. Those that are not should be adapted to encourage sustainable development. ESD should also become a key and essential component in the promulgation and processes of future laws. All negotiations and agreements should integrate ESD values and thinking. UNDESD provides a vital opportunity to improve diplomacy and co-operation amongst nations and regions. As UN Secretary General Kofi Annan has stated, 'our biggest challenge in this new century is to take an idea that sounds abstract – sustainable development – and turn it […] into a daily reality for all the world's people.'[22] The international community has endorsed education for sustainable development as a key tool for transforming this idea, this goal, into a reality. Humanity is suffering. Both the developing and developed world face a myriad of challenges. Work must be carried out collectively to address these issues and this challenge must be met in order to leave a sustainable world for our future generations.

22 United Nation Information Service, 'Secretary General Calls for Break in Political Stalemate over Environmental Issues', 15 March 2001, UN Press Release SG/SM/7739, www.unis.unvienna.org/unis/pressrels/2001/sgsm7739.html.

PART III

COMPLIANCE

INTRODUCTION TO THE DISCUSSION ON COMPLIANCE[1]

Patrick Széll[2]

Absence of effective enforcement and sanctions in early MEAs

Each of us would, I imagine, find it strange if our national legislature were to enact a new law that imposed duties on the public, but did not make effective provision for the enforcement of those duties or the imposition of sanctions for their breach. Such legislation would be criticized as incomplete and defective. Why is it then that international environmental legislation, i.e. multilateral environmental agreements (MEAs), makes little or no effective provision for enforcement or sanctions?

This was a question that many involved in the negotiation of MEAs started asking about twenty years ago, leading eventually to the development of compliance procedures. For treaties that contained no rigorous obligations, such as the Vienna Convention for the Protection of the Ozone Layer[3] or UNEP's Regional Seas Conventions,[4] the absence of an incisive policing mechanism was not a problem. For treaties with more onerous norms such as the Montreal Protocol on Substances that Deplete the Ozone Layer,[5] the various protocols to the Geneva Long-range Transboundary Air

[1] This paper is based on a lecture given by the author on 31 August 2004.

[2] Former Head of the International Environmental Law Division, Department of the Environment of the United Kingdom.

[3] The Vienna Convention for the Protection of the Ozone Layer, Vienna, 22 March 1985, in force 22 September 1988, 26 *International Legal Materials* (1987) 1529, www.unep.org/ozone/pdfs/viennaconvention2002.pdf.

[4] The texts of the numerous Regional Seas Conventions and Protocols are available at www.unep.ch/seas/main/hconlist.html.

[5] Montreal Protocol, *infra* note 12.

Pollution Convention,[6] or the Kyoto Protocol,[7] the question was of greater concern. It was important that their obligations were observed not just for the credibility of the MEA in question, but also for the sake of the environment.

Before 1987, there were just three ways in which the observance of obligations in MEAs could be supervised:

(a) Article 26, Vienna Convention on the Law of Treaties.[8]
Article 26 states that "Every treaty in force is binding upon the parties to it and must be performed by them in good faith." This reflects a fundamental and widely-recognized rule of international law but does not bring with it any automatic sanctions.

(b) Settlement of disputes.
Traditional dispute settlement procedures as incorporated in most MEAs are weak. Article 11 of the Vienna Ozone Convention, for example, only calls for negotiation or conciliation, unless both sides to the dispute agree to accept another, more far-reaching, form of dispute settlement. Only rarely have states agreed to compulsory third party dispute settlement under MEAs. Examples of these can be found in Article 32 of the OSPAR Convention,[9] in Part XV of the United Nations Convention on the Law of the Sea[10], and in Article 18 of the Council of Europe's Bern Convention on the Conservation of European Wildlife.[11] Two conclusions may be drawn:
(i) bilateral processes such as traditional dispute settlement procedures are not suitable for ensuring the enforcement of breaches that are essentially multilateral in nature; and
(ii) MEA Parties are not prepared to allow the performance of their obligations to be made subject to compulsory third party settlement.

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[6] Convention on Long-range Transboundary Air Pollution, Geneva, 13 November 1979, in force 16 March 1983, 18 *International Legal Materials* (1979) 1442, www.unece.org/env/lrtap/full%20text/1979.CLRTAP.e.pdf. The texts of the eight protocols to the CLRTAP are available at www.unece.org/env/lrtap/status/lrtap_s.htm.

[7] The 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, unfccc.int/resource/docs/convkp/kpeng.pdf.

[8] Vienna Convention on the Law of Treaties, Vienna, 22 May 1969, in force 27 January 1980, 1155 *United Nations Treaty Series* 331, www.un.org/law/ilc/texts/treaties.htm.

[9] Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris, 22 September 1992, in force 25 March 1998, 32 *International Legal Materials* (1993) 1069, www.ospar.org/eng/html/welcome.html.

[10] United Nations Convention on the Law of the Sea, 10 December 1982, in force 16 November 1994, 21 *International Legal Materials* (1982) 1261, www.un.org/Depts/los/convention_agreements/texts/unclos/unclos_e.pdf.

[11] Convention of the Conservation of European Wildlife and Natural Habitats, Bern, 19 September 1979, in force 1 June 1982, *Council of Europe Treaty Series* 104, conventions.coe.int/Treaty/en/Treaties/Html/104.htm.

(c) Peer pressure.
Peer pressure, applied at successive meetings of Conferences of Parties, on the basis of information received from various sources, including the Parties themselves as provided for under the reporting rules of certain MEAs, has over the years been the most effective sanction. Inevitably, however, this has tended to operate unevenly. Parties have varied in their vulnerability to peer pressure: some have been more receptive than others to outside suggestions and criticism, while some have been more forthcoming than others when providing data.

Whilst all three of these mechanisms have played their part, something extra was required for MEAs that were becoming increasingly normative. This was not least because the Parties to such treaties needed assurances that any costly economic steps they took to meet their commitments were being matched by the equally conscientious observance by other Parties of *their* commitments. In a nutshell, what was needed was a verification process that was more compelling than peer pressure, yet less confrontational and more multilateral than dispute settlement.

Montreal Protocol leads the way

The breakthrough came in 1987. Article 8 of the Montreal Protocol[12] provided that:

> The Parties, at their first meeting, shall consider and approve procedures and institutional mechanisms for determining non-compliance with the provisions of this Protocol and for treatment of Parties found to be in non-compliance.

Originally, this Article was little more than a tough negotiating ploy on the part of the USA aimed at keeping maximum pressure on the EC, its principal foe in the Protocol negotiations. As tabled by the USA, the Article was much more detailed, but was introduced too late in the process to stand any chance of being adopted as it stood. The negotiators could do no more than lay the foundation stone for a compliance regime in the treaty, and leave it to the Meeting of the Parties (MOP) to carry the idea forward.

What was subsequently developed by the MOP was very different from what the USA had originally envisaged. The MOP looked carefully at the available precedents from the fields of human rights, international trade law as embodied by the General Agreement on Tariffs and Trade (GATT) and arms control, but in the end opted to work with a blank sheet of paper and design its own system from scratch. The Working Group that developed the proposals identified a number of criteria that a compliance regime should satisfy. These criteria were affirmed by the MOP and, in later years, have

[12] Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, in force 1 January 1989, 26 *International Legal Materials* (1987) 154, www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf.

remained the basis on which all MEA compliance procedures have been structured: a compliance regime should aim to avoid complexity; be non-confrontational, conciliatory and co-operative; be transparent; and decisions, should be taken by the MOP, not by a subordinate body.

The logic is clear: MEAs such as the Montreal Protocol are better off with a compliance regime that assists and encourages Parties in breach to comply, than with one that is accusatorial in manner. Moreover, if Parties were subjected to a judicial process such as court proceedings or arbitration, they would become defensive and secretive, with the consequence that the environment, in this case the ozone layer, not the Parties themselves, would be the loser. In the case of an MEA such as the Montreal Protocol, non-compliance is frequently the consequence not of malice or greed, but of technical**,** administrative or economic problems. A regime that works with rather than against Parties in difficulty is appropriate.

The Montreal Protocol's compliance regime in a nutshell

The Montreal Protocol's compliance regime provides that where a party or the secretariat has reservations regarding another party's observance of its obligations, it can make a submission to the Implementation Committee (IC). In considering a submission, the IC may request and gather further information. The Committee seeks, where necessary, to secure 'an amicable solution'[13] to cases before it, on the basis of respect for the Protocol. The regime also makes provision for Parties to trigger the compliance process in respect of themselves, in the form of self-referrals, demonstrating thereby the essentially co-operative character of the process.

The IC is composed of the representatives of ten Parties, selected on the basis of equitable geographical distribution. They are elected for periods of two years, renewable once. One can contrast this to the regime applicable to the Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters,[14] where the Compliance Committee members serve in their personal capacities.

The IC has no decision-taking powers. Rather, it makes recommendations to the MOP. For those who developed the regime, this answered the concern that the Committee, given that it was not fully representative of the MOP, should not have such powers.

[13] Annex III: Noncompliance Procedure, *Report of the 2nd Meeting of the Parties to the Montreal Protocol*, UNEP/OzL.Pro.2/3, www.unep.org/ozone/Meeting_Documents/mop/02mop/MOP_2.asp.

[14] Convention on Access to Information, Public Participation in Decision-Making, and Access to Justice in Environmental Matters (hereinafter Aarhus Convention), Aarhus, 25 June 1998, in force 30 October 2001, 38 *International Legal Materials* (1999) 517, www.unece.org/env/pp/documents/cep43e.pdf.

The IC reports regularly to the MOP which, as the sovereign body of the Montreal Protocol, has certain powers. For example, the MOP can encourage Parties to seek financial assistance from the Global Environment Facility (GEF) or guidance from the Montreal Protocol's Technical and Economic Assessment Panel (TEAP). It can issue cautions and, arguably, impose a suspension.

Trends and conclusion

The Montreal Protocol's Implementation Committee has met since 1990 and those of the LRTAP Convention[15] and CITES[16] for the past seven and ten years, respectively. To date, these three ICs have the most practical experience of operating a compliance system. A number of other ICs have started work only comparatively recently. These include the ICs of the Basel Convention on Transboundary Movements of Hazardous Wastes,[17] the Espoo Convention on Environmental Impact Assessment in a Transboundary Context,[18] the Alpine Convention[19] and the Aarhus Convention.[20] Others have yet to begin their work. These include the Multilateral Consultative Process (MCP) of the United Nations Framework Convention on Climate Change[21] which was agreed - save for one point relating to composition – in 1998, the compliance procedure of the Kyoto Protocol[22] which was adopted in 2001 and will now become operative with the Protocol's entry into force, and the compliance regime of the Cartagena Protocol on Biosafety.[23]

[15] LRTAP Convention, *supra* note 6.

[16] Convention on International Trade in Endangered Species of Wild Flora and Fauna, Washington D.C., 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, www.cites.org/eng/disc/text.shtml.

[17] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, in force 24 May 1992, 28 *International Legal Materials* (1989) 657, www.basel.int/text/con-e.htm.

[18] Convention on Environmental Impact Assessment in a Transboundary Context, Espoo, 25 February 1991, in force 10 September 1997, 30 *International Legal Materials* (1991) 802, www.unece.org/env/eia/eia.htm.

[19] Convention Concerning the Protection of the Alps, Salzburg, 7 November 1991, in force 6 March 1995, 31 *International Legal Materials* (1992) 767, www.ecolex.org/ecolex/en/treaties/treaties_fulltext.php?docnr=3047&language=en.

[20] Aarhus Convention, *supra* note 14.

[21] United Nations Framework Convention on Climate Change, New York, 9 May 1992, in force 21 March 1994, 31 *International Legal Materials* (1992) 849, unfccc.int/files/essential_background/background_publications_htmlpdf/application/pdf/conveng.pdf.

[22] Kyoto Protocol, *supra* note 7.

[23] Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal, 29 January 2000, in force 11 September 2003, www.biodiv.org/doc/legal/cartagena-protocol-en.pdf.

It is perhaps not too early to identify some trends, and hazard some conclusions, about the nature and success of MEA compliance procedures, though inevitably they will be based mainly on the experience of the Montreal Protocol and LRTBAP Convention:

a) Infringement of sovereignty: MEA negotiations have consistently shown countries to be very sensitive to the external scrutiny of their performance. Hence, there is a need for a policing system that is supportive, constructive and respectful of national sovereignty.

b) Correlation: There is an inevitable correlation between the strictness of a treaty's compliance and enforcement regimes and the strictness of its substantive obligations. Countries are ready to undertake tougher commitments if supervision is light, and vice versa.

c) Settlement of disputes v. non-compliance: Although dispute settlement procedures are scarcely ever resorted to in MEAs, they are nevertheless useful as an ultimate deterrent. Dispute settlement and compliance regimes complement each other well. Compliance procedures are intended for regular use; dispute settlement will always be for exceptional use. Compliance procedures are more environmentally friendly: they are aimed at getting a party that is in breach to put matters right, rather than at pointing a finger of blame. Compliance procedures reflect a collective concern for meeting a treaty's obligations, rather than a bilateral one as is the case with dispute settlement.

d) Acting through decisions of the Parties: The practice of setting out all the procedural detail of a non-compliance regime in a decision of the Conference of the Parties, rather than attempting to do so in the treaty itself, is now well established and likely to be copied in all MEAs. The advantage is that in the early days of an MEA, the Parties and the MEA itself benefit from the Conference of the Parties having the possibility of adjusting the detail of the regime as and when necessary and in the light of experience.

e) Tailor-made regimes: Notwithstanding the textual similarity of all compliance regimes adopted to date, there is no case for building a single, uniform regime for all MEAs. Every MEA is different. Their obligations and their Parties differ. Each regime should be tailored to suit the individual case.

f) IC composition: Countries, not individuals, serve on the Implementation Committees of the Montreal Protocol, CLRTAP, CITES and other MEAs. It has been argued that the regimes would be stronger and more efficient if the Committees were composed of individuals acting in their personal capacities, rather than of representatives of countries elected to the IC. There would be, it is said, greater objectivity and expertise and more consistent attendance by members at meetings. A good number of countries are, however, nervous about taking such a step although it is known to work well in other contexts such as international courts.

Change is unlikely in the near future, at least until such time as Parties have acquired greater familiarity with, and confidence in, the work of their IC.
On the question of the most appropriate qualifications and background for IC members, whether selected to represent their countries or in their personal capacities, a mixture of expertise would seem to be the best solution. Committees composed merely of lawyers are not competent when it comes to assessing matters with a high scientific and/or technical content. Scientists and technicians presiding alone are not ideal as they tend to lack the required experience of judicial/administrative process and method. A committee formed of diplomats and policy experts alone can generate the suspicion of politicising a process that has to be very objective if it is to win and retain credibility. Fortunately perhaps, as long as Parties do the choosing, ICs will tend to reflect a cross-section of disciplines. Chance may well be, in the end, the shrewdest selector.

g) Impact of IC reports: Having begun their work some years ago, the reports to the parent bodies of the ICs of the Montreal Protocol and CLRTAP still tend to be cautious and limited in their proposals. Their work, nevertheless, has had a positive impact. Merely by annually demonstrating to the Parties that their performance is under scrutiny, pressure is applied on them to meet their obligations.

h) The need for precise obligations: It is easier – and more meaningful – to apply a compliance regime to a normative treaty, with its precise standards and deadlines, than to a framework agreement with unspecific, and sometimes even unclear obligations, as with the United Nations Framework Convention on Climate Change.

i) Confidence-building: No IC can establish its reputation and create confidence overnight. It takes time for Parties to get used to having their performance regularly reviewed but not fearing the process. Every MEA that sets up such a process is likely to have to go through such a confidence-building period. During that time, any feelings of frustration should be suppressed and replaced by patience and optimism.

Compliance

Issues for discussion:

(a) IC composition. Should Implementation Committee (IC) members represent their countries or be appointed, like ICJ judges, in their personal capacities? What are the advantages and disadvantages of the two options?

(b) NGO participation. The Aarhus Convention's IC allows cases to be triggered by members of the public. Most MEAs refuse NGOs and other members of civil society such a right. Are they right in doing so?

(c) Transparency of proceedings. What would be the impact on the work of ICs if their proceedings were to be held in public? Are the present rules of most MEAs, which ensure that the proceedings of their ICs are held in private, justifiable in terms of (i) the environment, (ii) the public in general and (iii) the Parties whose cases are under examination? Should there be rules for confidentiality?

(d) Respect for sovereignty. Have states a right to be sensitive about intrusions on their sovereignty in the course of the review of their compliance with treaty obligations? Can compliance review be carried out in a thorough and effective manner if a state's sovereignty has to be fully respected?

(e) Sanctions. Can a compliance regime be effective if the treaty it serves does not provide for the imposition of strong sanctions? How, if at all, can sanctions be introduced in support of a compliance regime after a treaty has been adopted?

(f) Cases concerning an IC member's own country. Should an IC member be able to take part in IC proceedings when the issue under discussion is the compliance of the member's own country? If so, should any conditions be placed on his/her participation?

IMPLEMENTATION, COMPLIANCE AND ENFORCEMENT OF MEAS: UNEP'S ROLE[1]

Elizabeth Maruma Mrema[2]

Introduction

The United Nations Conference on the Human Environment, held in Stockholm in 1972, set off a remarkable increase in the number of environmental treaties. Before that date, only a dozen international instruments related to the environment could be counted, whereas there are now approximately 700 multilateral environmental agreements (MEAs).[3] In this context, it is therefore clear that creating MEAs is at least seen as the most feasible, if not the best, means to combat environmental degradation. However, one the implications of this multiplication is that the main concern has become not whether there are enough legal tools to protect the environment but whether those in place are actually effective. To put it differently, the issue is whether states are indeed complying with and enforcing MEAs or not. The answer to this, of course, is that a lot remains to be done. Even within strong regional organizations such as the European Union, compliance problems overshadow the successes of the environmental *acquis communautaire.*

Inadequate implementation or lack of it is, of course, particularly strong in developing countries. Even though they sign and ratify treaties for multiple reasons – international pressure, domestic interests, etc. – many of these states may not effectively be able to implement or enforce them nationally. Some of the multiple reasons for this also affect developed countries. A series of recent United Nations Environment Programme

[1] This paper is based on a lecture given by the author on 31 August 2004. It was prepared with the assistance of Stanislas de Margerie, a student of law at the University of Sorbonne, who was an intern from July to September 2004 in the Division of Environmental Policy Implementation, United Nations Environment Programme.

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[3] Ronald Mitchell, 'International Environmental Agreements: A Survey of their features, Formation and Effects', 28 *Annual Review of Environmental Resources* (2003), 429-61.

(UNEP) regional workshops to review a Manual on Compliance with and Enforcement of MEAs,[4] held in 2003 and 2004 with more being carried out in 2005, revealed some of the key challenges facing developing countries. A few of these can be mentioned for illustration purposes: political and budgetary priorities focus on economic and poverty issues and not on the environment; inadequate awareness of environmental laws, or lack of it, by the regulated community, judges, lawyers, etc.; concerns that strict standards, implementation or enforcement may deter investors or cause them to turn to other countries; inadequate co-ordination with other states; environmental agencies and ministries are not always "respected" by older sectoral agencies and ministries; lack of transparency, of the importance of non-governmental organizations (NGOs) or of civil society participation, which are all closely related to a country's democratic situation; inadequate national legislation or lack of it; lack of awareness of the relevant regulations, including among industry, consumers or enforcement authorities; inadequate financial, human and technical resources, or lack of them; the costs of compliance, which create a financial incentive for evasion; inadequate penalties; problems with detection; lack of information and economic intelligence; and shortcomings in transboundary co-operation and monitoring.

Some difficulties are equally caused by MEAs themselves in that a number of them duplicate or overlap each other in several respects, including institutional arrangements for their implementation, follow-up, reporting and co-ordination. This has resulted in a lack of coherence and inadequate implementation, synergy and interlinkages both at the national and regional level. This in turn has created loopholes that undermine the very measures or functioning mechanisms put in place by the conventions.

UNEP too has a share of blame in the increasing number of new MEAs over the years. In the last decades, UNEP has focused its environmental law activities on the development of international environmental law rather than on its implementation. It facilitated, inspired, spearheaded and played a catalytic role in the development of several soft law and hard law instruments. The international community has now shifted its focus to the implementation of agreed international norms and policies, as is testified *inter alia* by the outcome of the World Summit on Sustainable Development (WSSD) and the Johannesburg Plan of Implementation.[5] The international community's task is to advance and enhance the implementation of agreed international norms and policies, and to monitor and foster compliance with environmental principles and international agreements. However, as international environmental law and its accompanying national legislation for environmental protection increase in quantity, complexity and sophistication, unfortunately the opportunities and determination to evade such laws through orchestrated criminal activities also increase.

[4] *Infra* note 26.

[5] World Summit on Sustainable Development, *Johannesburg Plan of Implementation*, www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIToc.htm.

Role of Global and Regional Bodies in Implementing MEAs

Shortcomings or inadequacy in the implementation of MEAs has been noted not only globally but also at the regional and national levels. Consequently, both the MEA secretariats and regional bodies have in recent years taken up initiatives to assist states parties to their MEAs, either specifically or generally, with measures and mechanisms to strengthen compliance, enforcement and implementation of those MEAs at the regional or national levels. For example:

(a) The United Nations Economic Commission for Europe (UNECE) has developed Guidelines for strengthening compliance with and implementation of MEAs[6] building upon the UNEP Guidelines adopted in 2003;
(b) The Organization for Economic Co-operation and Development (OECD) supported the Newly Independent States with the development of principles for environmental enforcement authorities;[7]
(c) The English speaking Caribbean adopted a set of Guidelines on Implementation of MEAs in 2000;[8]
(d) The Association of Southeast Asian Nations (ASEAN) are developing mechanisms to promote compliance and enforcement of MEAs in that region. The Guidelines propose options for more effective implementation of MEAs in those countries. They also selectively draw upon successfully adopted elements from the implementation strategies of individual countries in the region;
(e) The North American Commission for Environmental Co-operation, formed by the USA, Canada and Mexico, have established a North American Working Group on Environmental Enforcement and Compliance Co-operation (EWG) as its working arm to deal with these issues.

[6] United Nations Economic Commission for Europe, *Guidelines for Strengthening Compliance with and Implementation of Multilateral Environmental Agreements (MEAs) in the ECE Region*, UNECE Doc. ECE/107 (2003), www.unece.org/env/documents/2003/ece/cep/ece.cep.107.e.pdf.

[7] Organization for Economic Co-operation and Development, *Draft Principles for Effective Environmental Enforcement Authorities in [Transition Economies] of Eastern Europe, Caucases and Central Asia* (2002), www.oecd.org/dataoecd/45/52/2766225.pdf.

[8] United Nations Environment Programme, *MEAs Implementation in the Caribbean: Report and Guidelines*, UNEP/LAC-IGWG.XII/Inf.7 (2000), www.pnuma.org/foroalc/esp/bbexb07i-MEAsImplementationintheCaribbean.pdf.

Convention secretariats of major global MEAs are also taking initiatives to promote adherence by countries to bring MEAs effectively into force. Examples include:

(a) Implementation and compliance mechanisms under the Montreal Protocol;[9]
(b) Parties to the UNFCCC are developing procedures and mechanisms for compliance under the Kyoto Protocol;[10]
(c) Parties to the Basel Convention[11] are developing elements for monitoring the implementation of and compliance with obligations under the Convention;
(d) Parties to the Convention on Biological Diversity[12] are developing procedures and mechanisms to promote compliance and to address cases of non-compliance within the framework of the Biosafety Protocol;[13]
(e) Parties to the Convention on International Trade in Endangered Species (CITES)[14] are equally developing a comprehensive plan to concretely address, *inter alia*, compliance and enforcement issues. The CITES Secretariat also regularly reviews and analyzes the national laws of parties to determine whether such laws meet CITES implementation requirements. Consequently, collaboration with and support from the convention secretariat, as well as Interpol and the World Customs Organization is, in this process, *sine qua non* for the successful implementation of the guidelines on compliance and enforcement.

[9] Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal, 16 September 1987, in force 1 January 1989, 26 *International Legal Materials* (1987) 154, www.unep.org/ozone/pdfs/Montreal-Protocol2000.pdf.

[10] The 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, unfccc.int/resource/docs/convkp/kpeng.pdf.

[11] Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel, 22 March 1989, in force 24 May 1992, 28 *International Legal Materials* (1989) 657, www.basel.int/text/con-e.htm.

[12] Convention on Biological Diversity, Rio de Janeiro, 5 June 1992, in force 29 December 1993, 31 *International Legal Materials* (1992) 822, www.biodiv.org/doc/legal/cbd-en.pdf.

[13] Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal, 29 January 2000, in force 11 September 2003, 31 *International Legal Materials* (2000) 1027, www.biodiv.org/doc/legal/cartagena-protocol-en.pdf.

[14] Convention on International Trade in Endangered Species of Wild Flora and Fauna, Washington D.C., 3 March 1973, in force 1 July 1975, 993 *United Nations Treaty Series* 243, www.cites.org/eng/disc/text.shtml.

Compliance Does Not Necessarily Contradict Competitiveness

It is undeniable that one of the reasons environmental agreements take so long to be effectively implemented is that many national stakeholders fear taking steps in this direction. Whether in governments, which have as an objective the economic well-being of the country, or in industry, which aims to retain competitiveness and keep costs low, it is felt by many that environmental enforcement is a brake to economic development. This opinion, however widespread, seems largely misleading.

This view does not, indeed, take into account the fact that in rapidly evolving markets one of the most important and efficient responses from businesses is innovation. Environmental regulations are not the only factor to take into account. Trade regulations, changing consumer needs and competition from developing countries are all issues that are dealt with on a continual basis by industry. As a result of this, new behaviour appears with the common goal of adapting to the evolving situation. The reason why environmental regulations are sometimes seen as last on the list of urgent issues might, in fact, be that most of them derive from international or national regulations, which as written rules and despite their compulsory character are not internal factors to the economy itself, such as globalization, for example. They are perceived as outputs from governments that although directed at making the Earth a liveable planet, an objective which everyone would surely agree with, have the side effect of hindering economic development or activity.

Once again, this does not take into account the fact that properly designed environmental standards can trigger major innovations, and eventually create market value. In order not to make this sound like a seducing, albeit exaggerated theory, a few examples follow. In California, for example, the success of air pollution emissions reduction industries was a direct consequence of the state setting stringent environmental standards. Sweden's domination of the cellulose pulp processing industry is very clearly due to the extremely efficient production machinery developed by national industries to meet the country's high air and water quality as well as waste standards. In the Netherlands, to take another "local" example, intense cultivation of flowers in small areas contaminated soil and groundwater with pesticides, herbicides, and fertilizers. Due to increased regulation on the issue, the flower industry responded by putting in place a closed-loop system, with flowers growing in reused and circulating water. The need for chemical substances was subsequently reduced, product quality was improved through more precise monitoring and handling costs went down because flowers grew on specially designed platforms.

The Global Competitiveness Report 2001-2002 provides further evidence of this. Daniel Esty, from Yale Law School, and Michael Porter, from Harvard Business School, insist that '[t]he research reveals that there is no evidence that higher environmental quality compromises economic progress. Environmental performance is positively and highly correlated to GDP per capita. The . . . preliminary evidence suggest[s] that coun-

tries with stricter environmental regulations than would be expected at their level of GDP per capita enjoy faster economic growth.'[15]

On a more general basis, the European Commission released a report in 2001 on the costs and benefits of implementing the European *acquis communautaire* in new member countries.[16] This 'environmental acquis comprises around 300 Directives and Regulations, including daughter directive and amendments, and has been estimated to require an investment of around 80 to 120 billion EUR for the ten Central and Eastern European countries alone.'[17] One of the report's most remarkable conclusions is that 'In narrow monetary terms, the assessed benefits are likely to be of the same order of magnitude if not larger than the costs of implementing EU directives.'[18] This conclusion was obtained taking into account the low end of the benefit estimates, and not including several key environmental benefits. The scope of benefits analyzed was large, including, among others, health benefits through the reduction of illnesses, for example; resource benefits in the form of benefits to forestry, agriculture and fisheries; and wider economic benefits through attracting investment, reduced imports of primary materials due to recycling and reuse and tourism development. These illustrations, therefore, highlight the well-known economic benefits of environmental compliance for the population in general, but also remind that it is not an enemy of competitiveness.

An objection to this can be made in that the benefits of environmental compliance concern a broad and diffuse group of society, whereas the costs of implementing obligations would be endured by a small amount of economic stakeholders. If this is partly true, it remains that not only is the benefit-cost ratio globally positive for the community, a fact which should be taken into account by decision-makers of all kinds, but also that environmental compliance can be cost-effective at company level as well.

In a paper prepared for the Inter-American Development Bank, Lawrence Pratt[19] observes that 'superior environmental performance will be rewarded in the long run in

[15] Michael Porter, Jeffrey Sachs and John McArthur, 'Executive Summary: Competitiveness and Stages of Economic Development', *The Global Competitiveness Report 2001-2002* (Oxford University Press, 2001) 16-25, at 24, www.cid.harvard.edu/cr/pdf/GCR0102%20Exec%20Summary.pdf. For the full article see Daniel Esty and Michael Porter, 'Ranking National Environmental Regulation and Performance: A Leading Indicator of Future Competitiveness', *The Global Competitiveness Report 2001-2002* (Oxford University Press, 2001) 78-100, www.isc.hbs.edu/GCR_20012002_Environment.pdf.

[16] European Commission, *The Benefits of Compliance with the Environmental Acquis* (European Commission: Brussels, 2001), europa.eu.int/comm/environment/enlarg/pdf/benefit_xsum.pdf.

[17] *Ibid.*, at ii (footnote omitted).

[18] *Ibid.*, at xl (emphasis omitted).

[19] Lawrence Pratt, *Rethinking the Private Sector-Environment Relationship in Latin America*, Background Paper for the Seminar on the "New Vision for Sustainability: Private Sector and the Environment", IDB/IIC Annual Meeting of the Board of Governors New Orleans, Louisiana (March 25, 2000), www.iadb.org/mif/v2/files/Pratt-eng.pdf.

most industries and in national development.'[20] He goes on to note that 'Both theory and an emerging body of empirical evidence on the topic show that under most circumstances, improved environmental performance should improve a number of aspects of firm competitiveness, especially in developing countries.'[21] His research refutes the idea that adoption of stricter environmental standards by multinational enterprises constitutes a liability that depresses market value. On the contrary, the evidence from their analysis indicates that positive market valuation is associated with the adoption of a single stringent environmental standard around the world. In fact, he even observes that firms with a global environmental policy have a significantly higher market value than firms with lesser standards.

Considerations Regarding Developing Countries

These considerations and conclusions are also pertinent for developing countries. The latter are potentially the most reluctant to comply with environmental obligations because regulations in this area are easily perceived as a threat to already fragile economies. Economic stakeholders argue that increased costs to upgrade technology and treat externalities would hurt company level cost-competitiveness in the international marketplace and restrictive national environmental standards would encourage companies to invest in countries with less stringent standards. Environmental standard-setting and enforcement is therefore perceived by many as a luxury for wealthier countries, which developing countries can ill-afford. It cannot be denied that there is a large part of truth in these arguments. The temptation is then for developing countries to become the backyards of developed countries which could use them as not only a place where manpower is cheaper, but also where the authorities close their eyes to low-cost and dangerous environmental practices.

There are, however, many reasons why this should not be so. As recent empirical and theoretical experience shows, this traditional view is largely incorrect for most developing countries. For a start, to respond to the concern that complying with standards would make countries less attractive to foreign investment, another aspect of the issue must be considered: financier risk. Experiences in industrialized countries show that financial companies, which specialize in equity and insurance, reduce risks and increase opportunities by paying close attention to companies' environmental performance. Companies with a good environmental record are usually those which have enforced the toughest norms, and have lower accident rates or judicial proceedings with neighbouring communities or regulators.

Many financiers in developing countries argue that financial risk in the environment only concerns wealthy countries but there is evidence that this is not true. As regulatory systems are not as elaborate in developing countries where the legislation and legal

[20] *Ibid.*, at 3 (emphasis omitted).

[21] *Ibid.*, at 4.

frameworks are less sophisticated, responsibility is harder to assign and to predict and the general situation for the financial sector is rather unstable, with higher insurance costs. Top Latin American companies with higher levels of environmental performance are already receiving better credit terms from international banks.[22]

Other relevant proof of this comes from the study of trade regulations at an international level, which are evolving to allow countries to restrict imports on the basis of environmental criteria. In the field of tropical timber, for instance, the Agreement of the International Tropical Timber Organization currently permits any WTO member country to prohibit the importation of wood or wood products that are not certified as coming from sustainable sources. Although this has not been used against a producer country, it is a sign that developing countries, which are the main exporters of tropical wood, should enforce environmental regulations. In fact, the economies of most developing countries are based on natural resources which fall under a number of multilateral environmental agreements on water, wetlands, etc.

As awareness rises in developed countries, sanctions for contravening these rules could be detrimental. For instance, when it was discovered that a few containers from Chile contained grapes with a level of pesticides too high for the U.S. market, all Chilean grapes underwent a lengthy embargo. This remark can be easily generalized to trade agreements between developing countries and developed countries.

The North American Free Trade Agreement (NAFTA),[23] between the U.S.A., Canada, and Mexico includes a parallel agreement that compels the parties to undertake a wide range of activities aimed at strengthening environmental performance, resource management and co-operation.[24] As a result of this, Mexico undertook a major change in its environmental regulations, with a very clear improvement in the standards met by Mexican exporters.

In fact, trade agreements are an example of how the benefits of implementation and enforcement of environmental regulations outweigh by far those of not doing so. As authors Lawrence Pratt and Carolina Mauri put it, 'the correct calculus to be made by trade and economy ministers is essentially the following: "our companies can gain a 1 or 2% cost advantage on average if they are allowed to pollute without controls

[22] Lawrence Pratt and Carolina Mauri, 'Environmental enforcement and compliance and its role in enhancing competitiveness in developing countries', *7th INECE Conference Proceedings* (forthcoming 2005).

[23] North American Free Trade Agreement, 8 and 17 December 1992, Washington D.C., 11 and 17 December 1992, Ottawa, 14 and 17 December 1992, Mexico City, in force 1 January 1994, 32 *International Legal Materials* (1993) 296, www.nafta-sec-alena.org/DefaultSite/index_e.aspx?DetailID=78.

[24] North American Agreement on Environmental Co-operation, 8 and 17 December 1992, Washington D.C., 11 and 17 December 1992, Ottawa, 14 and 17 December 1992, Mexico City, in force 1 January 1994, 32 *International Legal Materials* (1993) 1480, www.cec.org/pubs_info_resources/law_treat_agree/naaec/index.cfm?varlan=english.

(damaging public health, weakening the natural resource base, etc), or we can implement our environmental legislation as a key piece of a trade integration package that will reduce the cost of accessing the world's largest market by three to fifteen percent of product value."' Aside from the objections of some vested political interests, the issue is rather clear-cut.'

UNEP Guidelines on Implementation of MEAs

In the global efforts to ensure that existing MEAs are complied with, enforced and implemented, in February 2002, governments at the Seventh Special Session of the UNEP Governing Council adopted the Guidelines on Compliance and Enforcement of MEAs,[25] which had been developed under the auspices of UNEP. These Guidelines try to address issues of implementation of MEAs in a focused and co-ordinated way. They provide much needed tools and approaches to negotiations and measures to ensure developing countries and countries whose economies are in transition appreciate fully their overall interest in becoming party to the different instruments and are given the means to implement them. The Guidelines respond to the international community's urgent need for enhancing compliance with and implementation of MEAs through institutional improvements, enhanced organizational co-ordination, strengthened national environmental implementation and enforcement mechanisms, capacity-building and training. The Guidelines, a pragmatic outcome of experience-sharing, and based on the views of both governments and MEA secretariats, seek to engage countries through a menu of options for strengthening the implementation of MEAs and the enforcement of national laws, regulations and policies.

It is clear from the Guidelines that implementation and enforcement of MEAs at the national level does not begin with the ratification of or accession to MEAs but from the period of negotiation of MEAs themselves. It is at this time that government positions are made, ensuring that national interests are reflected in the final texts of MEAs which, once they are ratified or acceded to and once they enter into force, are thereafter implemented at the national level. Consequently, to facilitate the role of the parties in the national implementation of MEAs, the Guidelines equally provide tools and measures for countries to take prior and during the negotiations in preparation for their implementation when they become binding upon states. The Guidelines, therefore, seek solutions for addressing the shortcomings in the implementation of MEAs listed above, which otherwise undermine the effectiveness of an MEA regime or a party's ability to live up to its obligations.

[25] Guidelines on compliance with and enforcement of multilateral environmental agreements, UNEP/GCSS. VII/4/Add.2 (2002), www.unep.org/GC/GCSS-VII/. A copy of the guidelines is annexed to this article.

Definitions of Terms

Although the terms compliance and enforcement are often used loosely and interchangeably, in so far as the Guidelines are concerned, compliance refers to the situation in which a state is with regard to its obligations under an MEA, i.e. whether it is in compliance or not. Enforcement on the other hand, refers to a set of actions, i.e. adopting laws and regulations, monitoring outcomes, etc., including various enabling activities and steps, which a state may take within its national territory to ensure implementation of an MEA. In other words, the term compliance is used in an international context while the term enforcement is used in a national one. Both ought to lead to effective implementation of specific MEAs or clusters of MEAs.

Nature and Scope of the Guidelines

The Guidelines, though not specific to any environmental agreement and relevant to present and future MEAs, provide approaches for enhancing compliance and implementation, recognizing that each MEA has been negotiated in a unique way and has its own independent legal status. The Guidelines acknowledge that compliance mechanisms and procedures should take account of the particular characteristics of the MEA in question. They emphasize that enforcement is essential for securing the benefit of laws, protecting the environment, public health and safety, deterring violations and encouraging improved performance. They anticipate a broad range of environmental issues, including global and regional environmental protection, management of hazardous substances and chemicals, prevention and control of pollution, desertification, conservation of natural resources, biodiversity, wildlife and environmental safety and health.

The purpose of these Guidelines is, specifically, to assist, among others, governments, national enforcement agencies, NGOs, the private sector and relevant stakeholders in enhancing and supporting compliance with and implementation of MEAs. They outline actions, initiatives and measures for states to consider for strengthening national enforcement and international co-operation in combating violations of laws implementing MEAs. They intended to facilitate consideration of compliance issues at the design and negotiation stage and also after the entry into force of the MEAs, at conferences and meetings of the parties.

The scope of the Guidelines is to address the enforcement of national laws and regulations implementing MEAs in a broad context, under which states, consistent with their obligations under such agreements, develop laws and institutions that support effective enforcement and pursue actions that deter and respond to environmental law violations and crimes. Some of the key approaches to fulfil include the promotion of appropriate and effective national laws and regulations implementing specific MEAs or cluster of MEAs. The Guidelines accord significance to the development of institutional capacities through co-operation and co-ordination among governments and international organisations for increasing the effectiveness of enforcement.

Conclusion

The Guidelines on compliance with and enforcement of MEAs discussed in this paper are general in nature and serve as a toolbox to assist the parties and prospective parties to MEAs in their implementation and enforcement of MEAs. However, improving compliance, enforcement and implementation of MEAs calls for practical, tangible guidance. In this regard and to provide a practical tool to further assist countries with a better understanding of the content of the Guidelines, UNEP has developed a Manual on Compliance with and Enforcement of MEAs.[26] This manual expands on the Guidelines and is being tested through a series of regional workshops. The Manual is intended to facilitate the use of the tools and checklist provided in the Guidelines through explanatory texts, practical examples, best/bad practices and case studies, checklists and other concrete assistance and advice to foster implementation. The Manual will be most useful as a reference document in which users will pick and choose what is most helpful and useful to them. Different provisions will be helpful to different users, such as legislative drafters or enforcement officers. If well utilized and referred to as a guide to the implementation of MEAs, it is hoped that the Guidelines and the Manual, when completed, will greatly improve compliance, implementation and enforcement of MEAs.

[26] United Nations Environment Programme, *Draft Manual on Compliance with and Enforcement of Multilateral Environmental Agreements (as of November 2004)*, www.unep.org/DEPI/programmes/meas-draft-manual-nov24-fullversion.pdf.

ANNEX

GUIDELINES ON COMPLIANCE WITH AND ENFORCEMENT OF MULTILATERAL ENVIRONMENTAL AGREEMENTS[1]

1. In its decision 21/27, dated 9 February 2001, the Governing Council of the United Nations Environment Programme (UNEP), recalling the Nairobi Declaration on the Role and Mandate of the United Nations Environment Programme and the Malmö Ministerial Declaration, requested the Executive Director "to continue the preparation of the draft guidelines on compliance with multilateral environmental agreements and on the capacity-strengthening, effective national environmental enforcement, in support of the ongoing developments of compliance regimes within the framework of international agreements and in consultation with Governments and relevant international organizations."
2. Pursuant to that decision, draft guidelines were prepared for submission to the UNEP Governing Council special session for review and adoption. They were adopted in decision SS.VII/4.
3. The guidelines are advisory. They provide approaches for enhancing compliance with multilateral environmental agreements and strengthening the enforcement of laws implementing those agreements. It is recognized that parties to the agreements are best situated to choose and determine useful approaches in the context of specific obligations contained in the agreements. Although the guidelines may inform and affect how parties implement their obligations under the agreements, they are non-binding and do not in any manner alter these obligations.
4. The guidelines are presented in two chapters: the first chapter deals with enhancing compliance with multilateral environmental agreements and the second chapter deals with national enforcement, and international cooperation in combating violations, of laws implementing multilateral environmental agreements.

[1] Guidelines on compliance with and enforcement of multilateral environmental agreements, UNEP/GCSS. VII/4/Add.2 (2002), www.unep.org/GC/GCSS-VII/.

I.
Guidelines for Enhancing Compliance with Multilateral

Environmental Agreements

Introduction

5. Strengthening of compliance with multilateral environmental agreements has been identified as a key issue. These guidelines provide approaches to enhance compliance, recognizing that each agreement has been negotiated in a unique way and enjoys its own independent legal status. The guidelines acknowledge that compliance mechanisms and procedures should take account of the particular characteristics of the agreement in question.

A. Purpose

6. The purpose of these guidelines is to assist Governments and secretariats of multilateral environmental agreements, relevant international, regional and subregional organizations, non-governmental organizations, private sector and all other relevant stakeholders in enhancing and supporting compliance with multilateral environmental agreements.

B. Scope

7. These guidelines are relevant to present and future multilateral environmental agreements, covering a broad range of environmental issues, including global environmental protection, management of hazardous substances and chemicals, prevention and control of pollution, desertification, management and conservation of natural resources, biodiversity, wildlife, and environmental safety and health, in particular human health.
8. The guidelines are intended to facilitate consideration of compliance issues at the design and negotiation stages and also after the entry into force of the multilateral environmental agreements, at conferences and meetings of the parties. The guidelines encourage effective approaches to compliance, outline strategies and measures to strengthen implementation of multilateral environmental agreements, through relevant laws and regulations, policies and other measures at the national level and guide subregional, regional and international cooperation in this regard.

C. Definitions

9. For the purpose of this chapter of these guidelines:
   (a) "Compliance" means the fulfilment by the contracting parties of their obligations under a multilateral environmental agreement and any amendments to the multilateral environmental agreement; [2]
   (b) "Implementation" refers to, inter alia, all relevant laws, regulations, policies, and other measures and initiatives, that contracting parties adopt and/or take to meet their obligations under a multilateral environmental agreement and its amendments, if any.

[2] Acknowledging that the term compliance has distinct relevance within the respective fields covered by both chapters and is a term well known and understood by those involved in both fields, albeit with a different understanding, it was decided to use two different definitions for this term in these guidelines, one for each chapter.

D. Compliance considerations

1. Preparatory work for negotiations

10. To facilitate compliance with multilateral environmental agreements, preparatory work for negotiations may be assisted by the following actions:
    (a) Regular exchange of information among States, including through the establishment of forums, on environmental issues that are the subject of negotiations and the ability of the States to address those issues;
    (b) Consultations in between negotiating sessions on issues that could affect compliance among States;
    (c) Workshops on compliance arranged by negotiating States or relevant multilateral environmental agreement secretariats that cover compliance provisions and experiences from other agreements with participation of Governments, non-governmental organizations, the private sector and relevant international, regional and subregional organizations;
    (d) Coordination at the national level among ministries, relevant agencies and stakeholders, as appropriate for the development of national positions;
    (e) Consideration of the need to avoid overlaps and encourage synergies with existing multilateral environmental agreements when considering any new legally binding instrument.

2. Effective participation in negotiations

11. To facilitate wide and effective participation by States in negotiations, the following actions may be considered:
    (a) Assessment of whether the issue to be addressed is global, regional or subregional, keeping in mind that, where appropriate, States could collaborate in regional and subregional efforts to promote implementation of multilateral environmental agreements;
    (b) Identificationof countries for which addressing an environmental problem may be particularly relevant;
    (c) Establishment of special funds and other appropriate mechanisms to facilitate participation in negotiations by delegates from countries requiring financial assistance;
    (d) Where deemed appropriate by States, approaches to encourage participation in a multilateral environmental agreement, such as common but differentiated responsibilities, framework agreements (with the content of the initial agreement to be further elaborated by specific commitments in protocols), and/or limiting the scope of a proposed multilateral environmental agreement to subject areas in which there is likelihood of agreement;
    (e) Transparency and a participatory, open-ended process.

3. Assessment of domestic capabilities during negotiations

12. Participating States could, in order to support their efforts to negotiate a multilateral environmental agreement and determine whether they would be able to comply with its provisions, assess their domestic capabilities for implementing the agreement under negotiation.

4. Compliance considerations in multilateral environmental agreements

13. The competent body of a multilateral environmental agreement could, where authorized to do so, regularly review the overall implementation of obligations under the multilateral environmental agreement and examine specific difficulties of compliance and consider measures aimed at improving compliance.
14. States are best placed to choose the approaches that are useful and appropriate for enhancing compliance with multilateral environmental agreements. The following considerations may be kept in view:
    (a) Clarity: To assist in the assessment and ascertainment of compliance, the obligations of parties to multilateral environmental agreements should be stated clearly;
    (b) National implementation plans could be required in a multilateral environmental agreement, which could potentially include environmental effects monitoring and evaluation in order to determine whether a multilateral environmental agreement is resulting in environmental improvement;
    (c) Reporting, monitoring and verification: multilateral environmental agreements can include provisions for reporting, monitoring and verification of the information obtained on compliance. These provisions can help promote compliance by, inter alia, potentially increasing public awareness. Care should be taken to ensure that data collection and reporting requirements are not too onerous and are coordinated with those of other multilateral environmental agreements. Multilateral environmental agreements can include the following requirements:
        (i) Reporting: Parties may be required to make regular, timely reports on compliance, using an appropriate common format. Simple and brief formats could be designed to ensure consistency, efficiency and convenience in order to enable reporting on specific obligations. Multilateral environmental agreement secretariats can consolidate responses received to assist in the assessment of compliance. Reporting on non-compliance can also be considered, and the parties can provide for timely review of such reports;
        (ii) Monitoring: Monitoring involves the collection of data and in accordance with the provisions of a multilateral environmental agreement can be used to assess compliance with an agreement, identify compliance problems and indicate solutions. States that are negotiating provisions regarding monitoring in multilateral environmental agreements could consider the provisions in other multilateral environmental agreements related to monitoring;
        (iii) Verification: This may involve verification of data and technical information in order to assist in ascertaining whether a party is in compliance and, in the event of non-compliance, the degree, type and frequency of non-compliance. The principal source of verification might be national reports. Consistent with the provisions in the multilateral environmental agreement and in accordance with any modalities that might be set by the conferences of the parties, technical verification could involve independent sources for corroborating national data and information.
    (d) Non-compliance mechanisms: States can consider the inclusion of non-compliance provisions in a multilateral environmental agreement, with a view to assisting parties having compliance problems and addressing individual cases of non-compliance, taking into account the importance of tailoring compliance provisions and mechanisms to the agreement's specific obligations. The following considerations could be kept in view:
        (i) The parties can consider the establishment of a body, such as a compliance committee, to address compliance issues. Members of such a body could be

party representatives or party-nominated experts, with appropriate expertise on the relevant subject matter;

(ii) Non-compliance mechanisms could be used by the contracting parties to provide a vehicle to identify possible situations of non-compliance at an early stage and the causes of non-compliance, and to formulate appropriate responses including, addressing and/or correcting the state of non-compliance without delay. These responses can be adjusted to meet varying requirements of cases of non-compliance, and may include both facilitative and stronger measures as appropriate and consistent with applicable international law;

(iii) In order to promote, facilitate and secure compliance, non-compliance mechanisms can be non-adversarial and include procedural safeguards for those involved. In addition, non-compliance mechanisms can provide a means to clarify the content, to promote the application of the provisions of the agreement and thus lead significantly to the prevention of disputes;

(iv) The final determination of non-compliance of a party with respect to an agreement might be made through the conference of the parties of the relevant multilateral environmental agreement or another body under that agreement, if so mandated by the conference of the parties, consistent with the respective multilateral environmental agreement.

5. Review of effectiveness

15. The conference of the parties of a multilateral environmental agreement could regularly review the overall effectiveness of the agreement in meeting its objectives, and consider how the effectiveness of a multilateral environmental agreement might be improved.

6. Compliance mechanisms after a multilateral environmental agreement has come into effect

16. Compliance mechanisms or procedures could be introduced or enhanced after a multilateral environmental agreement has come into effect, provided such mechanisms or procedures have been authorised by the multilateral environmental agreement, subsequent amendment, or conference of the parties decision, as appropriate, and consistent with applicable international law.

7. Dispute settlement provisions

17. In principle, provisions for settlement of disputes complement the provisions aimed at compliance with an agreement. The appropriate form of dispute settlement mechanism can depend upon the specific provisions contained in a multilateral environmental agreement and the nature of the dispute. A range of procedures could be considered, including good offices, mediation, conciliation, fact-finding commissions, dispute resolution panels, arbitration and other possible judicial arrangements which might be reached between concerned parties to the dispute.

E. National implementation

1. National measures

18. Compliance assessment: Prior to ratification of a multilateral environmental agreement, a State should assess its preparedness to comply with the obligations of that agreement. If areas of potential non-compliance are identified, that State should take appropriate measures to address them before becoming a party to that agreement.
19. Compliance plan: If a State, once it becomes a party to a specific multilateral environmental agreement, subsequently identifies compliance problems, it may consider developing a compliance plan consistent with that agreements obligations and inform the concerned secretariat accordingly. The plan may address compliance with different types of obligations in the agreement and measures for ensuring compliance. The plan may include benchmarks, to the extent that this is consistent with the agreement that would facilitate monitoring compliance.
20. Law and regulatory framework: According to their respective national legal frameworks, States should enact laws and regulations to enable implementation of multilateral environmental agreements where such measures are necessary for compliance. Laws and regulations should be regularly reviewed in the context of the relevant international obligations and the national situations.
21. National implementation plans: the elaboration of national implementation plans referred to in paragraph 14 (b) for implementing multilateral environmental agreements can assist in integrating multilateral environmental agreement obligations into domestic planning, policies and programmes and related activities. Reliable data collection systems can assist in monitoring compliance.
22. Enforcement: States can prepare and establish enforcement frameworks and programmes and take measures to implement obligations in multilateral environmental agreements (chapter 2 contains guidelines for national enforcement, and international cooperation in combating violations of laws implementing multilateral environmental agreements).
23. Economic instruments: In conformity with their obligations under applicable international agreements, parties can consider use of economic instruments to facilitate efficient implementation of multilateral environmental agreements.
24. National focal points: Parties may identify national authorities as focal points on matters related to specific multilateral environmental agreements and inform the concerned secretariat accordingly.
25. National coordination: Coordination among departments and agencies at different levels of government, as appropriate, can be undertaken when preparing and implementing national plans and programmes for implementation of multilateral environmental agreements.
26. Efficacy of national institutions: The institutions concerned with implementation of multilateral environmental agreements can be established or strengthened appropriately in order to increase their capacity for enhancing compliance. This can be done by strengthening enabling laws and regulations, information and communication networks, technical skills and scientific facilities.
27. Major stakeholders: Major stakeholders including private sector, non-governmental organizations, etc., can be consulted when developing national implementation plans, in the definition of environmental priorities, disseminating information and specialized knowledge and monitoring. Cooperation of the major stakeholders might be needed for enhancing capacity for compliance through information, training and technical assistance.
28. Local communities: As appropriate, parties can promote dialogue with local communities about the implementation of environmental obligations in order to ensure compliance in conformity with the purpose of an agreement. This may help develop local capacity and

assess the impact of measures under multilateral environmental agreements, including environmental effects on local communities.

29. Women and youth: The key role of women and youth and their organizations in sustainable development can be recognized in national plans and programmes for implementing multilateral environmental agreements.
30. Media: The national media including newspapers, journals, radio, television and the Internet as well as traditional channels of communication, could disseminate information about multilateral environmental agreements, the obligations in them, and measures that could be taken by organizations, associations and individuals. Information could be conveyed about the measures that other parties, particularly those in their respective regions, might have taken to implement multilateral environmental agreements.
31. Public awareness: To promote compliance, parties could support efforts to foster public awareness about the rights and obligations under each agreement and create awareness about the measures needed for their implementation, indicating the potential role of the public in the performance of a multilateral environmental agreement.
32. Access to administrative and judicial proceedings: Rights of access to administrative and judicial proceedings according to the respective national legal frameworks could support implementation and compliance with international obligations.

2. Capacity-building and technology transfer

33. The building and strengthening of capacities may be needed for developing countries that are parties to multilateral environmental agreements, particularly the least developed countries, as well as parties with economies in transition to assist such countries in meeting their obligations under multilateral environmental agreements. In this regard:
    (a) Financial and technical assistance can be provided for building and strengthening organizational and institutional capacities for managing the environment with a view to carrying forward the implementation of multilateral environmental agreements;
    (b) Capacity-building and technology transfer should be consistent with the needs, strategies and priorities of the country concerned and can build upon similar activities already undertaken by national institutions or with support from multilateral or bilateral organizations;
    (c) Participation of a wide range of stakeholders can be promoted, taking into consideration the need for developing institutional strengths and decision-making capabilities and upgrading the technical skills of parties for enhancing compliance and meeting their training and material requirements;
    (d) Various funding sources could be mobilized to finance capacity-building activities aimed at enhancing compliance with multilateral environmental agreements, including funding that may be available from the Global Environment Facility, in accordance with the Global Environment Facility mandate, and multilateral development banks, special funds attached to multilateral environmental agreements or bilateral, intergovernmental or private funding;
    (e) Where appropriate, capacity-building and technology transfer activities and initiatives could be undertaken at regional and subregional levels;
    (f) Parties to multilateral environmental agreements could consider requesting their respective secretariats to coordinate their capacity-building and technology transfer initiatives or undertake joint activities where there are cross-cutting issues for cost-effectiveness and to avoid duplication of efforts.

F. International co-operation

34. There is a recognized need for a commitment by all countries to the global process of protecting and improving the environment. This may be furthered by the United Nations and other relevant international organizations, as well as through multilateral and bilateral initiatives for facilitating compliance. In this regard, steps can be taken for:
    (a) Generating information for assessing the status of compliance with multilateral environmental agreements and defining ways and means through consultations for promotion and enhancement of compliance;
    (b) Building and strengthening capacities of, and transferring technologies to, developing countries, particularly the least-developed countries, and countries with economies in transition;
    (c) Sharing national, regional and subregional experiences in environmental management;
    (d) Evaluating by conferences of the parties, in the context of their overall review of the effectiveness of their respective multilateral environmental agreement, the effectiveness of mechanisms constituted under such multilateral environmental agreements for the transfer of technology and financial resources;
    (e) Assisting in formulating guidance materials which may include model multilateral environmental agreement implementing legislation for enhancing compliance;
    (f) Developing regional or subregional environmental action plans or strategies to assist in the implementation of multilateral environmental agreements;
    (g) Fostering awareness among non-parties about the rights, benefits and obligations of becoming a party to a multilateral environmental agreement and inviting non-parties as observers to meetings of decision-making bodies under multilateral environmental agreements to enhance their knowledge and understanding of the agreements;
    (h) Enhancing cooperation among multilateral environmental agreement secretariats, if so requested by the parties to the respective multilateral environmental agreements.

II.
Guidelines for National Enforcement, and International Co-operation in Combating Violations, of Laws Implementing Multilateral Environmental Agreements

Introduction

35. These guidelines recognize the need for national enforcement of laws to implement multilateral environmental agreements. Enforcement is essential to secure the benefits of these laws, protect the environment, public health and safety, deter violations, and encourage improved performance. These guidelines also recognize the need for international cooperation and coordination to facilitate and assist enforcement arising from the implementation of multilateral environmental agreements and help to establish an international level playing field.

A. Purpose

36. These guidelines outline actions, initiatives and measures for States to consider for strengthening national enforcement and international cooperation in combating violations of laws implementing multilateral environmental agreements. The guidelines can assist Governments, its competent authorities, enforcement agencies, secretariats of multilateral environmental agreements, where appropriate, and other relevant international and regional organizations in developing tools, mechanisms and techniques in this regard.

B. Scope

37. The guidelines address enforcement of national laws and regulations implementing multilateral environmental agreements in a broad context, under which States, consistent with their obligations under such agreements, develop laws and institutions that support effective enforcement and pursue actions that deter and respond to environmental law violations and crimes. Approaches include the promotion of appropriate and effective laws and regulations for responding appropriately to environmental law violations and crimes. These guidelines accord significance to the development of institutional capacities through cooperation and coordination among international organizations for increasing the effectiveness of enforcement.

C. Definitions

38. For the purpose of this chapter of these guidelines:
    (a) "Compliance" means the state of conformity with obligations, imposed by a State, its competent authorities and agencies on the regulated community, whether directly or through conditions and requirements in permits, licences and authorizations, in implementing multilateral environmental agreements;[3]

[3] Acknowledging that the term compliance has distinct relevance within the respective fields covered by both chapters and is a term well known and understood by those involved in both fields, albeit with a different understanding, it was decided to use two different definitions for this term in these guidelines, one for each chapter.

(b) "Environmental law violation" means the contravention of national environmental laws and regulations implementing multilateral environmental agreements
(c) "Environmental crime" means the violations or breaches of national environmental laws and regulations that a State determines to be subject to criminal penalties under its national laws and regulations;
(d) "Enforcement" means the range of procedures and actions employed by a State, its competent authorities and agencies to ensure that organizations or persons, potentially failing to comply with environmental laws or regulations implementing multilateral environmental agreements, can be brought or returned into compliance and/or punished through civil, administrative or criminal action.

D. National enforcement

39. Each State is free to design the implementation and enforcement measures that are most appropriate to its own legal system and related social, cultural and economic circumstances. In this context, national enforcement of environmental and related laws for the purpose of these guidelines can be facilitated by the following considerations.

1. National laws and regulations

40. The laws and regulations should be:
(a) Clearly stated with well-defined objectives, giving fair notice to the appropriate community of requirements and relevant sanctions and enabling effective implementation of multilateral environmental agreements;
(b) Technically, economically and socially feasible to implement, monitor and enforce effectively and provide standards that are objectively quantifiable to ensure consistency, transparency and fairness in enforcement;
(c) Comprehensive with appropriate and proportionate penalties for environmental law violations. These would encourage compliance by raising the cost of non-compliance above that of compliance. For environmental crime, additional deterrent effect can be obtained through sanctions such as imprisonment, fines, confiscation of equipment and other materials, disbarment from practice or trade and confiscation of the proceeds of environmental crime. Remedial costs should be imposed such as those for redressing environmental damage, loss of use of natural resources and harm from pollution and recovery of costs of remediation, restoration or mitigation.

2. Institutional framework

41. States should consider an institutional framework that promotes:
(a) Designation of responsibilities to agencies for:
(i) Enforcement of laws and regulations;
(ii) Monitoring and evaluation of implementation;
(iii) Collection, reporting and analysis of data, including its qualitative and quantitative verification and provision of information about investigations;
(iv) Awareness raising and publicity, in particular for the regulated community, and education for the general public;
(v) Assistance to courts, tribunals and other related agencies, where appropriate, which may be supported by relevant information and data.
(b) Control of the import and export of substances and endangered species, including the tracking of shipments, inspection and other enforcement activities at border crossings, ports and other areas of known or suspected illegal activity;

c) Clear authority for enforcement agencies and others involved in enforcement activities to:
   (i) Obtain information on relevant aspects of implementation;
   (ii) Have access to relevant facilities including ports and border crossings;
   (iii) Monitor and verify compliance with national laws and regulations;
   (iv) Order action to prevent and remedy environmental law violations;
   (v) Coordinate with other agencies;
   (vi) Impose sanctions including penalties for environmental law violations and non-compliance.

(d) Policies and procedures that ensure fair and consistent enforcement and imposition of penalties based on established criteria and sentencing guidelines that, for example, credibly reflect the relative severity of harm, history of non-compliance or environmental law violations, remedial costs and illegal profits;

(e) Criteria for enforcement priorities that may be based on harm caused or risk of harm to the environment, type or severity of environmental law violation or geographic area;

(f) Establishing or strengthening national environmental crime units to complement civil and administrative enforcement programmes;

(g) Use of economic instruments, including user fees, pollution fees and other measures promoting economically efficient compliance;

(h) Certification systems;

(i) Access of the public and civil society to administrative and judicial procedures to challenge acts and omissions by public authorities and corporate persons that contravene national environmental laws and regulations, including support for public access to justice with due regard to differences in legal systems and circumstances;

(j) Public access to environmental information held by Governments and relevant agencies in conformity with national and applicable international law concerning access, transparency and appropriate handling of confidential or protected information;

(k) Responsibilities and processes for participation of the appropriate community and non-governmental organizations in processes contributing to the protection of the environment;

(l) Informing legislative, executive and other public bodies of the environmental actions taken and results achieved;

(m) Use of the media to publicize environmental law violations and enforcement actions, while highlighting examples of positive environmental achievements;

(n) Periodic review of the adequacy of existing laws, regulations and policies in terms of fulfilment of their environmental objectives;

(o) Provision of courts which can impose appropriate penalties for violations of environmental laws and regulations, as well as other consequences.

3. National coordination

42. Coordination among relevant authorities and agencies can assist national enforcement, including:

(a) Coordination among various enforcement agencies, environmental authorities, tax, customs and other relevant officials at different levels of government, as well as linkages at the field level among cross-agency task forces and liaison points, which may include formal agreements such as memoranda of understanding and rules of procedure for communication, as well as formulation of guidelines;

(b) Coordination by government agencies with non-governmental organizations and the private sector.

(c) Coordination among the authorities responsible for promoting licensing systems to regulate and control the importation and exportation of illicit substances and hazardous materials, including regulated chemicals and wastes.

4. Training for enhancing enforcement capabilities

43. Training activities for enhancing enforcement capabilities can comprise of:
    (a) Programmes to build awareness in enforcement agencies about their role and significance in enforcing environmental laws and regulations;
    b) Training for public prosecutors, magistrates, environmental enforcement personnel, customs officials and others pertaining to civil, criminal and administrative matters, including instruction in various forms of evidence, case development and prosecution, and guidance about imposition of appropriate penalties;
    (c) Training for judges, magistrates and judicial auxilliaries regarding issues concerning the nature and enforcement of environmental laws and regulations, as well as environmental harm and costs posed by violations of such laws and regulations;
    (d) Training that assists in creating common understanding among regulators, environmental enforcement personnel, prosecutors and judges, thereby enabling all components of the process to understand the role of each other;
    (e) Training of environmental enforcement personnel including practical training on inspection techniques, advanced training in investigation techniques including surveillance, crime scene management and forensic analysis;
    (f) Development of capabilities to coordinate action among agencies domestically and internationally, share data and strengthen capabilities to use information technology for promoting enforcement;
    (g) Development of capabilities to design and use economic instruments effectively for enhancing compliance;
    (h) Development of innovative means for securing, raising and maintaining human and financial resources to strengthen enforcement;
    (i) Application of analytical intelligence techniques to grade and analyse data and provide information to assist in targeting resources on environmental criminals.

5. Public environmental awareness and education

44. Public environmental awareness and education can be increased by the following actions:
    (a) Generating public awareness and environmental education, particularly among targeted groups, about relevant laws and regulations and about their rights, interests, duties and responsibilities, as well as about the social, environmental and economic consequences of non-compliance;
    (b) Promoting responsible action in the community through the media by involving key public players, decision-makers and opinion-builders in such campaigns;
    (c) Organizing campaigns for fostering environmental awareness among communities, non-governmental organizations, the private sector and industrial and trade associations;
    (d) Inclusion of awareness and environmental educational programmes in schools and other educational establishments as part of education;
    (e) Organizing campaigns for fostering environmental awareness and environmental educational programmes for women and youth;
    (f) Organizing campaigns for encouraging public involvement in monitoring of compliance.

E. International cooperation and coordination

45. Consistent with relevant provisions in multilateral environmental agreements, national enforcement of laws and regulations implementing multilateral environmental agreements could be supported through international cooperation and coordination that can be facilitated by, inter alia, UNEP. The following considerations could be kept in view.

1. Consistency in laws and regulations

46. States, within their national jurisdictions, can consider developing consistent definitions and actions such as penalties and court orders, with a view to promoting a common approach to environmental law violations and environmental crimes, and enhance international cooperation and coordination, for environmental crimes with transboundary aspects. This may be facilitated by:
    (a) Environmental laws and regulations that provide appropriate deterrent measures, including penalties, environmental restitution and procedures for confiscation of equipment, goods and contraband, and for disposal of confiscated materials;
    (b) Adoption of laws and regulations, implemented and applied in a manner that is consistent with the enacting state's international obligations, that make illegal the importation, trafficking or acquisition of goods, wastes and any other materials in violation of the environmental law and regulations;
    (c) Appropriate authority to make environmental crime punishable by criminal sanctions that take into account the nature of the environmental law violation.

2. Cooperation in judicial proceedings

47. Cooperation between and amongst states in judicial proceedings may be facilitated by:
    (a) Cooperation in judicial proceedings and procedures related to testimony, evidence and similar matters, including exchange of information, mutual legal assistance and other co-operative arrangements agreed between the concerned countries;
    (b) Developing appropriate channels of communication with due respect for the various systems in place in different states, for timely exchange of information relevant to the detection of environmental law violations as well as pertaining to the judicial process.

3. Institutional framework

48. States can consider the strengthening of institutional frameworks and programmes to facilitate international cooperation and coordination in the following ways:
    (a) Designation and establishment of channels of communication and information exchange among UNEP, the secretariats of multilateral environmental agreements, the World Customs Organization and relevant intergovernmental entities, research institutes and non-governmental organizations, and international law enforcement agencies such as the International Criminal Police Organization (Interpol) especially through its "Green Interpol" activities;
    (b) Strengthening measures to facilitate information exchange, mutual legal assistance and joint investigations with other enforcement entities with the objective of strengthening and promoting greater consistency in laws and practices;
    (c) Development of infrastructure needed to control borders and protect against illegal trade under multilateral environmental agreements, including tracking and information systems, customs codes and related arrangements, as well as measures that could help lead to identification of illegal shipments and prosecution of offenders;

(d) Development of technology and expertise to track suspect shipments, accompanied by information on specific production sources, the import and export of regulated chemicals and wastes, licensing systems, customs and enforcement data;
(e) Strengthening mechanisms to facilitate information exchange regarding verification of illegal shipments and coordinating procedures for storing, processing and returning or destroying confiscated illegal shipments, as well as development of confidential channels, subject to domestic laws, for communicating information regarding illegal shipments;
(f) Designation of appropriate national and international points of contact to be forwarded to the UNEP enforcement database;
(g) Facilitation of transborder communications between agencies, considering that States may designate responsibility on the same subject to different agencies, such as customs, police or wildlife officials;
(h) Establishment of regional and subregional programmes providing opportunities for sharing information and strengthening training for detecting and prosecuting environmental crimes;
(i) Allocation of adequate resources to support the effective enforcement and effective implementation of policies.

4. Capacity-building and strengthening

49. Developing countries, particularly the least developed countries, and countries with economies in transition, require the building and strengthening of capacities for enforcement. It is recognized that environmental enforcement may be affected by conditions of poverty and governance that need to be addressed through appropriate programmes. The following measures can be considered for building and strengthening capacities for enforcement:
(a) Coordinated technical and financial assistance to formulate effective laws and regulations and to develop and maintain institutions, programmes and action plans for enforcement, monitoring and evaluation of national laws implementing multilateral environmental agreements;
(b) Development of specific guidelines with reference to particular agreements for law enforcement officers to conduct operations, investigations and inspections, and procedures for reporting and processing information nationally and internationally;
(c) Formulation of programmes for coordinating compliance and enforcement actions including compliance promotion, with other States;

(d) Use of regional and subregional centres and workshops to provide opportunities for sharing information and experiences and for cost-effective and long-term training programmes;
(e) Participation in international meetings, courses and training programmes, as well as in regional and global networks to facilitate sharing information and access to implementation and training materials.

PART IV

SPECIAL THEME: WATER

WORLD WATER RESOURCES AND PROBLEMS[1]

Esko Kuusisto[2]

Terrestrial Renewable Supply

Fresh water constitutes 2.5 percent of the total water volume on Earth, and two thirds of fresh water is locked into remote ice caps and glaciers. Just 0.77 percent of all fresh water is accessible to man: in groundwater, soil pores, lakes, swamps, rivers, the atmosphere and living things, including men themselves. Part of the volume of even these sources is salty water, the use of which for many human purposes is limited.

Only fresh water flowing through the solar-powered hydrological cycle is renewable. This annual flux is about 500 000 km^3; the accuracy of this figure is probably not better than ±5 percent, which is also roughly its annual variability. The methods to estimate this crucial flux are still so poor that any attempts to determine its possible trends due to the enhanced greenhouse effect are more or less insignificant. The estimates of the annual river flow in the world vary between 35 000 km^3 and 45 000 km^3. An often cited figure is 40 700 km^3, based on an extensive inventory by UNESCO in the 1960s and 1970s.

A maximum sustainable - although highly theoretical - limit for the use of natural fresh water is the total precipitation on all land areas. This is called the terrestrial renewable freshwater supply (TRFS), and its value has been estimated at 110 300 km^3. For comparison, this is four times the water volume of the Baltic Sea. As a long-term average, the global TRFS is the sum of river flow and evapotranspiration, but in short-term calculations the changes in terrestrial water storages induce small fluctuations into this balance. If the UNESCO estimate is used for global runoff, the estimate for land area evapotranspiration is 69 600 km^3. Thus river flow amounts to 37 percent and evapotranspiration to 63 percent of TRFS.

[1] This paper is based on a lecture given by the author on 26 August 2004.

[2] Hydrologist, Finnish Environment Institute (SYKE).

The Amazon River accounts for 14 percent of global runoff. As the population of the Amazon Basin is only 0.5 percent of world population, man's possibilities to utilize this huge freshwater source in this basin are very limited. The same is true for several other large rivers: the Zaire, Mackenzie, Ob, Jenisei, and Lena rivers and a number of rivers in tropical and subtropical Asia. For example, on the islands of Kalimantan and New Guinea there are six rivers bigger than the Nile (which has a mean flow of 2600 $m^3 s^{-1}$), but very few people have ever heard even the names of these giants (Kapuas, 5600 $m^3 s^{-1}$; Sepik, 4800 $m^3 s^{-1}$; Mahakam, 4560 $m^3 s^{-1}$; Mamberamo, 4110 $m^3 s^{-1}$; Fly, 3870 $m^3 s^{-1}$; Rajang, 3120 $m^3 s^{-1}$).

Together, the inaccessible remote river flow is globally estimated to be about 9 000 km^3, i.e. about one fifth of all river water. This leaves 31 700 km^3 that is geographically accessible. Unfortunately, this amount is very unevenly distributed in time; flood flows constitute the bulk of it. Quantitatively, "the bulk" can only be estimated based on different assumptions and definitions; there is no rigorous scientific way to perform this task. Generally, different estimates usually fall in the vicinity of 20 000 km^3. Thus, from the human point of view, about half of all river flow is lost; at the same time this "water loss" often induces material losses together with human suffering and victims. The most efficient way to reduce the amount of water lost during floods is the construction of reservoirs. The present storage capacity of man-made reservoirs is around 5500 km^3, of which some 3500 km^3 is actively used to regulate runoff.

Approximately 11 000 km^3 of the global river runoff can be considered as stable surface or groundwater flow. Adding to this the component controlled by dams gives an estimate of the total stable flow. As some reservoirs have a large year-round storage capacity, about half of the actively regulated flow can be considered a part of annual flow. Thus, the total stable flow amounts to about 12 700 km^3.

The portion of total stable flow used by humans will also be estimated. A logical distinction is made between two categories of water use: withdrawals or abstraction, and human instream flow needs. Withdrawals or abstractions i.e. water removed from rivers, lakes or aquifers, is also referred to as the water demand. Part of this water is returned to the river it was taken from and can be used again (although water quality is often deteriorated); part of it will never be available to other users. The latter use is referred to as water consumption. In the case of human instream flow needs, water stays in the river, but is used for waste water dilution, navigation, hydropower production etc. This type of water utilization may also affect water quality and, consequently, although it can be used again, other users as well.

Agriculture is by far the largest water use sector in the world. Agricultural water withdrawals are estimated to be around 2900 km^3 per year. The proportion of consumption to withdrawals varies with climatic factors; it typically ranges between 50 percent and 80 percent. With an average estimate of 65 percent, global agricultural water consumption amounts to 1880 km^3. Industrial water use is levelling off or even declining in many developed countries, but continues to grow in the developing world. Including the

thermoelectric power industry, industrial use is around 1020 km^3 annually. Most of this is discharged back into rivers; only about 100 km^3 is consumed. Municipal water use per capita varies greatly between countries. A rather rough global estimate is 300 km^3 per year, of which some 50 km^3 is consumed.

When considering overall water consumption by humankind, at least one additional component should be included. Evaporation losses from reservoirs are significant particularly in arid climates. Total consumption due to this phenomenon is usually estimated to be 5 percent of the reservoir volume annually, i.e. 270 km^3. Thus, overall human water consumption can be estimated to be some 2300 km^3 per year, while total withdrawals amount to 4500 km^3. Even the latter figure is only some 12 percent of total river runoff. On the basis of this percentage, there should be no major water problems in the world.

The instream water use requirement should also be estimated, but this cannot be made with reasonable accuracy. In calculation attempts, this requirement is usually assumed to be mainly created by the need to dilute pollution. An often used dilution factor for assessing waste absorption capacity is 28 litres per second per 1000 people. Applying this rate to the present world population yields a requirement of 5100 km^3.

In actual fact, the waste waters of roughly one third of global population go through at least secondary treatment before being discharged back into the watercourse, while in developed countries floods may cause major waste flushing events. Thus, it is not wise to give anything but a scale estimate of a few thousand cubic kilometres for the instream dilution use of water. The flow requirement of navigational uses might be of the same order of magnitude. Mankind also utilizes considerable amounts of rain-water directly in agricultural and other biomass production. This "green water use" has been estimated at 18 200 km^3 per year, i.e. much more than the amount of "blue water use".

The Water Resources of Different Regions

At a high level of authority, water resources have been defined by the World Meteorological Organisation (WMO) as the total amount of water available, or capable of being made available, for use in sufficient quantity and quality at a location and over a period of time appropriate for an identifiable demand. At the continental level, blue water resources range between 4000 $m^3\ a^{-1}\ cap^{-1}$ (Europe, Asia) and 50 000 $m^3\ a^{-1}\ cap^{-1}$ (Australia and Oceania). However, owing to the huge water resources of New Guinea, the figure for Australia itself is considerably smaller, only half of the blue water resources of the "genuinely wettest" continent, South America.

When the water resources of a country are presented, they may refer to the total amount of water flowing in the rivers of that country. This is a reasonably good definition in the case of island states, but unfortunately national borders do not coincide with river basin

divides. This implies that many countries have foreign water flowing in their rivers. Therefore, a better way is to give the water resources of a country without the inflows from upstream countries. The range between different countries is very large:

	Country	m³/a per capita
1	Iceland	606 000
2	Surinam	452 000
3	Guyana	282 000
4	Papua New Guinea	174 000
5	Gabon	140 000
...		
34	Finland	21 300
...		
149	Saudi Arabia	119
150	Jordan	114
151	United Arab Emirates	64
152	Egypt	43
153	Kuwait	11

Water Quality Issues

From a human health point of view, the key issues driving water quality degradation today include waterborne pathogens and noxious and toxic pollutants. According to the World Health Organisation (WHO), waterborne infectious diseases caused three million deaths in 1995, 80 percent of these were children under five.

Water pollution problems owing to human activities exist and affect all living things at different levels, both in developed and developing countries. Industrial, mining and waste disposal sites are the most frequent point pollution sources of aquatic ecosystems. The cumulative impact of multi-point pollution is common in many urbanized river basins. Diffuse pollution by nitrates, phosphates and pesticides together with eutrophication occurs as a result of poor agricultural water management. When this pollution affects groundwater, problems become more complicated than in the case of surface waters.

Salt water intrusions caused by aquifer overexploitation in coastal areas and by irrigation of agricultural lands also affect large areas. The acidification of soil and fresh water by atmospheric emissions of sulphur and nitrogen dioxide are problems with continental dimensions.

Land Degradation

An extensive survey by the United Nations Environment Programme (UNEP) has estimated that almost 20 million square kilometres of land in the world are degraded. This is 17 percent of all vegetated land in the world. The largest areas of degraded land occur in Asia and Africa but the loss of drylands is, surprisingly, highest in Europe. This can perhaps be related to the intensity and length of land use in the Mediterranean region. Lightly degraded land has lost below 10 percent of its productivity. For moderately degraded land the loss is 10-25 percent, for strongly degraded land 25-50 percent and for extremely degraded land over 50 percent. Of the total of 20 million square kilometres, the percentages for these four categories have been estimated at 38, 46, 15 and 0.5 percent, respectively. Water is most responsible for land degradation, causing 56 percent of it. This is twice as much as that caused by wind. Chemical degradation is responsible for 12 percent and physical processes for 4 percent.

In its survey, UNEP placed special focus on Africa. Water erosion is a particularly severe problem in South Africa and Namibia; in the Sahel it hits worst the Ethiopian Highlands, which can lose up to one billion tonnes of top soil per annum. However, even though it can be completed with good accuracy on an experimental plot, the estimation of erosion rates over a large area is very difficult. A high fraction of erosion may take place during intense storm events, which are localized and might not hit scientists' experimental plots. In addition, much of the sediment load in rivers may come from bank erosion rather than from agricultural lands affected by the catchment.

Salinization contributes to the land degradation of less than 4 percent of the total degraded area. However, it should be taken into account that the loss is very different if one hectare of fertile, irrigated land is degraded instead of one hectare of low-quality land. Salinization is, in fact, a particular nuisance in irrigated areas.

Water Scarcity

There are many ways to classify regions or countries according to water scarcity. In a widely used classification, four categories of water stress, based on the availability of fresh water, are distinguished: low water stress, moderate water stress, medium-high water stress, and high water stress. Low water stress occurs in countries that use less than 10 percent of their available fresh water. These countries generally do not experience major stresses on the available resources. Moderate water stress occurs when the use of available water in the range of 10-20 percent. This generally indicates that availability is becoming a limited factor, and significant effort and investment are needed to increase supply and reduce demand. Medium-high water stress occurs when water withdrawals are in the range of 20-40 percent. The management of both supply and demand will be required to ensure that the use remains sustainable. There will be a need to resolve competing human uses, and aquatic ecosystems will require special attention

to ensure they have adequate water flows. Developing countries, in particular, will need major investments to improve the efficiency of water use. High water stress means use of more than 40 percent of available water. This indicates serious scarcity, and usually an increasing dependence on desalination, fossil groundwater etc. There is an urgent need for intensive management of the supply and demand of water.

In addition to these water stress categories, the UN has divided people into four income classes: low, lower-middle, upper-middle and high. Well over half of the world's 6.2 billion people fall into the low income category, and more than one third of these people are in countries that already face medium-high to high water stress. The main water use in these countries is for irrigation, to a large extent with the same methods that have been in use for thousands of years. These countries also suffer from a lack of water pollution control. As to what the future holds, they have neither the water nor the money to shift development away from inefficient irrigation. Elsewhere, climate change is not expected to coddle these countries.

International River Basins

A divide between two river basins would often be a suitable line along which to draw a border between neighbouring countries. In fact, there are many such borders in the world, most of them very peaceful. However, the cases in which national borders follow a river or are crossed by them are even more frequent. Along these borders, conflicts over water use have been numerous. Altogether, there are almost 250 international river basins, covering more than half of the Earth's land area and affecting a population of 2.8 billion people. Most international river basins are shared by two countries; 30 are shared by three, eight by four and 14 by five or more.

There are 60 countries in the world in which the proportion of foreign water exceeds 20 percent:
Africa: Egypt (96), Mauritania (96), Niger (89), Namibia (86), Botswana (80), Sudan (77), the Congo (Congo-Brazzaville) (73), Eritrea (68), Chad (65), the Gambia (62),Ghana (62), Benin (60), Mali (60), Somalia (56), Mozambique (53), Swaziland (42), Guinea-Bissau (41), Kenya (33), Senegal (33), Zambia (31), Zimbabwe (30), Nigeria (21).
Asia: Turkmenistan (96), Cambodia (82), Uzbekistan (76), Azerbaijan (61), Iraq (60), Vietnam (60), Syria (52), Tajikistan (47), Bangladesh (42), Thailand (38), Pakistan (36), Kazakhstan (33), Jordan (24), Israel (21).
Europe: Hungary (95), Bulgaria (91), the Netherlands (89), Moldova (83), Romania (82), Luxembourg (80), Slovakia (80), Yugoslavia (65), Albania (53), Latvia (49), Portugal (45), Germany (44), Lithuania (43), Croatia (42), Austria (38), Belgium (33), Slovenia (32), Belarus (29), Estonia (27), Greece (23).
South America: Paraguay (70), Uruguay (52), Venezuela (35), Argentina (30), Brazil (25).

In addition to the percentage of foreign water used, other important factors are the overall amount of foreign water and the location of foreign water sources in the country. If a large international river flows far from the population centres or main agricultural areas of a country, this additional water source might not be of great value.

International waters can also be located under ground. If a groundwater aquifer is shared by two or more countries, questions about water ownership become even more difficult than with surface waters. In the case of renewable groundwater, hydrologically there is no difference with surface water; the rights to use water should be divided proportionally to the aquifer recharge. In case of fossil water, however, this logic does not work.

How, then, should international rivers be managed? Six research perspectives needed for the "perfect" management of international rivers have been presented: natural sciences, engineering, social optimization, law, decision-making, and ethics. From the natural sciences perspective, essential information on physical, chemical and biological processes in the river basin is needed. The engineering perspective has led to questions concerning how different structural measures affect water resources. These measures have been the core of 20th century river basin management. With social optimization, a balance between benefits and costs is sought; optimal versus feasible solutions are to be presented. The law perspective should give comparisons between the rules and practices of river basin management, as well as address the relationship between management rules and justice. Within decision-making, the actual behaviour of all actors – water users, economic sectors, authorities, etc. – and their motives should be studied. Last, but not easiest lies the question: "What is ethical?" The answer may be completely different in neighbouring countries. Fertile ground for successful river basin management has been created if research from all these perspectives is carried out. In practice, this has happened very seldom, if ever. Even if it would happen one day, all perspectives are at their best semi-objective.

Measures to Reduce Water Scarcity

Many opportunities exist to increase water resources. Some of these can be introduced with relatively low costs, some require expensive technology. However, there are also methods which can be characterized as high-tech but low-cost. Often, the effective use of water resources is more important than trying to increase them. If waste water is abundant in the world, wasted water might be even more abundant. Water use efficiencies below 50 percent are common in agriculture, industry and municipal water use. The following section will not give water-saving tips; instead some methods to increase water resources are discussed. Their order is not based on their potential importance, but mainly on their position in the hydrological cycle.

Rainfall augmentation

Throughout history, man has tried to modify the weather. Rainmaking has been a favourite topic. The modern technology of weather modification is based on the discovery in the late 1940s that supercooled cloud droplets could be converted into ice crystals with the help of an artificial nucleus such as silver iodide. Today, the knowledge on cloud microphysics offers relatively good possibilities to estimate when a cloud seeding can be successful. The atmosphere needs to be in such a condition that a relatively small human-induced disturbance can trigger the formation of rain. The best targets are often clouds hanging over a mountain slope, where seeding can reach a long cloud band in one flight. The successful seeding of cumulus clouds, however, is rather difficult.

Altogether some sixty countries have performed trials in scientific rainmaking. The most extensive experiments have been carried out in the USA, Israel, Australia, Italy and the former Soviet Union. The results have not always been convincing. Among the most successful are the seedings in northern Israel in 1961-75; they increased winter precipitation by 15-20 percent. A similar increase was obtained in Jordan in 1995, over an area of 8000 km^2 in the northern part of the country. In Colorado, a 10 percent enhancement has been reached. Increases in excess of 50 percent have been reported in some experiments, but it is possible that they are exaggerated.

Cloud seeding may also cause problems of a legal nature. A neighbouring country might interpret this manipulation to have adverse effects within its territory with thinking along the lines of: "If they hadn't made rain there, it would have rained in our country." Consequently, the international community is developing guidelines for resolving conflicts arising from weather modification activities.

Rainwater harvesting

Rainwater harvesting refers to the collection and concentration of rainfall and its use for different purposes, mainly in agriculture and by households. In the past, water harvesting played an important role world-wide in agricultural societies in arid and semiarid areas. After a decline during the 20th century, it has regained importance in recent decades.

Each rainwater harvesting system requires a catchment area with a sufficiently high runoff coefficient. According to the size of this catchment, three major types of rainwater harvesting can be distinguished: microcatchment harvesting, macrocatchment harvesting, and large catchment harvesting. A microcatchment can be a roof or an inclined collection basin with low infiltration capacity. A single tree or bush can be planted directly into this basin. Macrocatchment harvesting is also called water harvesting from long slopes or harvesting from external catchment systems. In this case, the catchment is located outside the cropping area, to where water is then transferred.

Large catchment harvesting systems can be many square kilometres in size and give rise to runoff water flowing through wadis or other channels. This method is also called floodwater harvesting and is comprised of two forms. In the case of "floodwater harvesting within the river bed" the water is dammed and, as a result, it partly or completely inundates the valley bottom or flood plain. The water is then absorbed into the earth leaving the area available for use as pastures or even cropland. In the case of "floodwater diversion" water is forced to leave its natural course and is conveyed to nearby cropping areas. Large catchment harvesting requires more complex structures of dams and distribution networks and higher technical knowledge than the other two harvesting methods.

Internationally, the best known rainwater harvesting systems are those found in the Negev Desert. They date back as far as the 10th century B.C. and reached their peak some two millenia later. Cisterns carved into the hillsides to ensure drinking water throughout the year for people, sheep and goats were an essential part of the system. In northern Yemen, a system also dating back to at least 1000 B.C. diverted enough water to irrigate up to 20 000 hectares, producing food for as many as 300 000 people. Since at least the Roman times, water harvesting techniques were applied intensively in northern Africa. Archaeological research has revealed that the wealth of the "granary of the Roman Empire" was largely based on runoff irrigation. In Egypt, the northwest coast and northern Sinai have a long tradition of water harvesting. Wadi terracing structures have been used there for several millenia.

Successful water harvesting projects are often based on field experience and trial and error rather than on scientifically well established techniques. Thus, they cannot be reproduced easily. Agricultural extension services often have limited experience with these methods. In very dry years, rainwater harvesting cannot necessarily compensate for water shortages. Another disadvantage is the possible conflict between upstream and downstream users, and possible harm to fauna and flora adapted to running waters and wetlands. Rainwater harvesting can also be a rather labour-intensive method.

Collection of fog and dew

The collection of fog droplets in coastal and high mountain areas as well as the harvesting of dew in desert areas was practised already in ancient times. This form of water collection took place in Mexico, Chile, Colombia, Sudan, Yemen, Oman and Namibia, for example. Moisture collection can be improved by using artificial surfaces such as nets or polyethylene sheets. Today, in the village of Chungungo in northern Chile, 75 synthetic nets with a total area of 3500 m^2 are used to collect moisture from fog. In average weather conditions, about three litres of water per square metre can be collected per day. Prior to the introduction of this system, water was delivered to the 350 villagers by tankers from a distance of 70 km.

Old and new groundwater innovations

A quanat is a horizontal tunnel that taps underground water in an alluvial fan without pumps or other equipment, and brings water to the surface. A quanat system is composed of three parts: one or more vertical head well, dug into the water-bearing layers of an alluvial fan, to collect water; a gently downward-sloping tunnel leading the water from the head wells to a lower point at the surface; and a series of vertical shafts between the ground surface and the tunnel, for ventilation and removal of excavated debris.

The longest quanat in Iran is 40 km long and has a mouth diameter of almost two metres. Altogether, there are an estimated 40 000 quanats in Iran with a total length of 270 000 km. Until the 1950s, the quanat system provided for over half of Iran's water needs and many towns still utilize them. The digging of quanats obviously required much labour and a special class of slaves existed in Ancient Persia to maintain the system. Areas that can be supplied with water from quanats lie near low-elevation alluvial fans and often provide less fertile soil conditions than those which are higher up. Sometimes quanats dry up during prolonged droughts and collapsed tunnels occur.

An example of unconventional technology being used to collect groundwater can be found with the construction of underground dams. Compared to an open-water reservoir, groundwater is well protected against evaporation losses, which can be as high as four metres per year in a hot, arid climate. It is not uncommon that geological conditions allow the damming of a permeable layer, which is confined by an impermeable stratum. Nature itself uses this system extensively in coarse river sediments.

Desalination

Several techniques are available to convert saline or brackish water into fresh water. Examples are distillation processes which can include multistage flash (MSF), multiple-effect distillation (MED) and vapour compression; electrodialysis processes such as electrodialysis and electrodialysis reversal; reverse osmosis (RO) processes; and freezing.

Over 12 000 desalination plants with a combined total capacity of 25 million m^3 per day had been installed world-wide by the end of 1997 (excluding shipboard units). Some of the plants are located in slightly astonishing places with, for example, the northernmost one in the world serving oil production in the Alaskan North Slope. A large plant is lowering the salt content of the Colorado River at the Mexican border.

With 26 percent of global desalination capacity, Saudi Arabia leads the world in this area. Almost two thirds of global capacity is in the Middle East, 10 percent is in North America and 8 percent is in Europe. Distillation - both MSF and MED - account for 65 percent of capacity, RO for about 30 percent and electrodialysis for some 5 percent. About half of all desalination plants have RO systems, but the use of distillation in large units answers for its high share of the capacity. In recent years, the global desalination

market has been driven by industrial development, tourism and population increase, especially in the Middle East, North Africa and Southern Europe. In 1996 the value of the market was US$ 1.6 billion and was expected to exceed US$ 2 billion by 2001. Prices, however, are falling as competition increases in the equipment market, particularly in membrane technology.

Desalination using renewable energy has been intensively studied in recent years. The idea is not new; a plant based on solar desalination was built in Las Salinas, Chile, in 1872. It was in use for 40 years and produced about 20 m^3 of fresh water per day. The world's largest desalination plant is now in Libya (2000 m^3 per day); it is partly powered by wind turbines. The European Union also has an interest in solar desalination. A small EU-funded pilot joint solar/wind plant is in operation on Tenerife and two more have been planned, one in Greece and one in Jordan. These plants collect the sun's rays to heat water, but also use windmills to reduce the atmospheric pressure and thus decrease the boiling point of the seawater taken into the system. The cost of desalinated water in the Tenerife plant has been estimated at US$ 1.9/m^3.

The cost of desalinated water varies significantly depending on plant type and size, the quality and source of water, the location of the plant in relation to the coast, the price of energy, chemicals and labour, and the cost of waste disposal. In general, the costs are still so high that the use of desalinated water for irrigation purposes is too expensive. A study performed in 1994 compared the costs of water transfer and desalination in order to increase the water resources of the Gaza Strip. The conveyance of water from the Nile to Gaza was estimated at US$ 0.20-0.82 per m^3, from the Euphrates to Gaza at US$ 0.36-0.82 per m^3 and desalination at US$ 0.61-0.87 per m^3. The reduction of desalination costs is possible in the future. The best current technologies use about 30 times the theoretical minimum energy requirement. New innovations might reduce energy requirements to ten times the minimum. However, for the foreseeable future, desalination is likely to continue to be used primarily to meet household water needs in water-scarce, energy-rich countries.

Water transfer

A number of large water transfer projects have been carried out on all continents, excluding Antarctica, particularly in the latter half of the 20th century. Most of them have been intra-country projects in, for example, Southwestern United States, Australia, Libya and Saudi Arabia. The largest water transfer project in the world, the Kara-Kum Canal, also used to involve only one country, the Soviet Union, but today is shared by four partners: Tajikistan, Kyrgystan, Uzbekistan and Turkmenistan. Most of the runoff is generated in the first two countries, while the use of water is concentrated in the latter pair. This cannot be without causing tension in the region.

In southern Africa, there are several water transfer projects either in the construction or the planning stages. South Africa already receives water from Lesotho and the scheme is being extended. As for Botswana, the country only has two perennial river systems,

the Chobe and the Okavango in the north. These constitute around 95 percent of the country's total surface water. In addition, they flow through sparsely populated areas at the same time feeding biologically important and sensitive areas, most notably the Okavango Delta. A recent plan by the Botswana Government was to take water from the Okavango and pump it to the South by pipeline. This plan was stopped by environmentalists and high-level pressure from the international community. Considering these pressures, the Botswana Government launched the National Water Master Plan for the period 2000-2020. Central to it is the huge US$ 400 million North-South Carrier Project. This scheme consists of a 360 km long, 1.4 m diameter pipeline, which will take water to the capital Gaborone from the Letsibogo Dam, to be built at the confluence of four rivers in the northern part of the country.

One of several water transfer utopias is located in the southern half of Africa. The water-stressed states in the south could in theory set their sights on the huge River Zaire, as the "ultimate solution" to their need for new water resources. The scarcity of water is a dominant feature in almost all southern Africa countries. For a Finn, a symbol for this situation could take the name of the currency in Botswana, the "pula", which means rain in the Setswana language.[3]

Apart from water, power can also be transferred. The African Development Bank agreed in 1993 to pay for a feasibility study for erecting a 4000 km power line from Zaire[4] to Egypt. The idea was to turn the Zaire River into a major hydropower source. This river could produce up to 20 000 MW of electricity from one site, the Inga Falls. The world's largest existing hydropower plant, the Itaipu in the Parana River, produces some 12 000 MW.

Iceberg utilization

The Antarctic releases 1000 km^3 of fresh water each year in the form of tabular icebergs. This is one quarter of human water withdrawals. The idea of transferring this resource to lower latitudes is not new. Small icebergs were towed from southern Chile to Valparaiso and Laguna San Rafael already in the 1880s. A suitable iceberg for today's towing efforts would be two kilometres long, half a kilometre wide and some 200 metres thick. Satellite images could be used to locate the candidates. Insulation against melting could be provided, whereby losses during a half a year's trip from the Antarctic waters to the Arabian coast would only be 20-30 percent. Vessels big enough for towing already exist.

[3] Pula in Finnish means "shortage".

[4] Now the Democratic Republic of the Congo (Congo-Kinshasa).

What does one do when an iceberg arrives? This is a good and rather difficult question. First of all, conventional ports are far too shallow for a load which extends to the depth of at least one hundred metres. Perhaps a floating port with ice-grinding facilities and a pipeline to transfer the "ice flour" to the shore could be a suitable alternative. The cold content of an iceberg can be as valuable in energy production as its water content is in its use. This double-benefit greatly improves the economy of the undertaking. However, although Saudi Arabia for example has performed a feasibility study on iceberg utilization, no country has started a modern ice business.

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INTERNATIONAL LAW AND WATER[1]

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Introduction

Many natural resources have a double function: on one hand, they serve as natural resources subject to human consumption and exploitation and, on the other hand, they have a particular ecosystem function. Water is a good example of such a natural resource. While it has several uses such as navigation and irrigation, it also has an essential ecosystem role. This dual character is reflected in international rules which regulate and manage water issues. Indeed, over the last hundred years or so, international law has strived to solve, regulate and manage various problems relating to the utilization and protection of water.

International law textbooks usually make a distinction between marine and freshwater resources. While the former refers to oceans and seas, the latter includes, in particular, rivers and lakes. Given the different nature and international character of marine and freshwater resources it is understandable that legal frameworks covering them are quite different. This work will concentrate on the protection and utilization of freshwater resources which have an international character.

Boundary waters refer to waters such as rivers, lakes, reservoirs and canals, parts of which are situated in different states.[3] They are called boundary waters because they either form a boundary between states or they run across one. For example, in many cases state boundaries have been drawn to coincide with rivers or a watershed for easy

[1] This paper is based on a lecture given by the author on 26 August 2004. The paper is also based on the work: Tuomas Kuokkanen, *International Law and the Environment: Variations on a Theme*, The Erik Castrén Institute of International Law and Human Rights, Volume 4 (Kluwer International: The Hague/London/New York, 2002).

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[3] See Article 2(b), Convention on the Law of the Non-navigational Uses of International Watercourse, New York, 21 May 1997, not yet in force, 36 *International Legal Materials* (1997) 700, www.un.org/law/ilc/texts/nonnav.htm.

recognition. With regard to contiguous rivers that cross boundaries, interest in regulating them results from the physical qualities of such rivers.[4] Boundary waters are also called international watercourses because they are already by definition international. For this reason, regulations on the use of these shared natural resources[5] have to be established bilaterally or multilaterally. Conversely, states do not have an interest in regulating the internal waters of other countries which do not affect international waters.[6]

In order to understand better the various legal aspects relating to water issues, rules of international law relating to water can be divided into three broad categories or approaches: general international law, the regulatory approach and the management approach. The first category refers to general functions of law, such as dispute settlement, or classical principles, such as good faith or *sic utere*. The regulatory approach seeks to solve problems in advance through international regulation. As opposed to general rules, the approach consists of specific substantive rules on the utilization and protection of waters. The management approach refers to a more technical and policy oriented approach where politics and diplomacy have more of a supervisory role. It aims, through technically oriented management, to co-ordinate, reconcile and optimize long-term water concerns and short-term utilization interests.

While the approaches are divided on substantive grounds, they also reflect historical development. The general international law approach refers in particular to the era before substantive water regulations. The regulatory approach grew in the 20th century from the need to regulate utilization and protection of water issues. The management approach began to develop in the 1980s and 1990s. However, even though the management approach tends to dominate currently, the other two doctrines are nevertheless still relevant, and not retired to the history books.[7]

[4] As Berber notes, 'water which is today in the territory of one state and therefore a part of its state territory will flow tomorrow into the territory of another state and become part of that state's territory.' See F.J. Berber, *Rivers in International Law* (1959), at 4.

[5] In discussing early treaties on fresh water Schwebel notes that 'their assumption that boundary waters are a shared natural resource is beyond controversy.' See Stephen M. Schwebel, Special Rapporteur, 'The second report on the law of the non-navigational uses of international watercourses', *Yearbook of the International Law Commission* (1980), Vol. II Part One, at 195.

[6] For example, the crux of the case concerning the diversion of water from the River Meuse, which related to the use of the canal known as Zuid-Willemsvaart, was the finding that the two parties had limited their sovereignty only at the treaty area. Outside this area, the parties were free to take any action provided that it would not violate the treaty. See *Case Concerning the Diversion of Water from the River Meuse (Netherlands v. Belgium) (Judgement)*, PCIJ Series A/B, No. 70 (1937) at 26.

[7] For discussion, see Kuokkanen (2002), *supra* note 1, at xxi-xxxiii and 347-358.

Recourse to general international law

Early water conflicts were relatively infrequent. Moreover, if such disputes occurred they were predominantly bilateral in nature. It was therefore sufficient to deal with them retrospectively through traditional international dispute settlement techniques by applying general international law to the facts.

Traditionally, water issues reflect the tension between an upstream and a downstream country. From a legal point of view, the starting point in considering the applicable law is the abandonment of the doctrine of absolute sovereignty which would allow an upstream country to use waters in its territory without limitations and a downstream country to prohibit the causing of any harm. As both the upstream and downstream country can rely on it in an absolute manner, the doctrine is self-contradictory. In the water context, the doctrine of absolute territorial sovereignty propounded by Judson Harmon in his legal opinion has become known as the Harmon doctrine.[8] The doctrine is based on a philosophical approach supported by early scholars, rather than an application of international law in an adjudicative context. In view of this lack of professional value, the Harmon doctrine revealed a need to develop more functional and analytical ways to deal with water disputes.

The *Lac Lanoux* case[9] is a seminal case relating to water in which the arbitral tribunal managed to settle the dispute by applying judicial techniques. The case illustrates how a resort to third-party adjudication may prevent stalemates and promote a more constructive solution.[10] By distinguishing between the formal and substantive aspects of sovereignty, a method capable of resolving concrete issues, unlike the Harmon doctrine, was applied by the tribunal. To supplement this method, the tribunal used procedural techniques involving the allocation of burden of proof. From the environmental point of view, the ruling recognized that a state has a right to use its natural resources but must take into account the interests of other states.

The dispute in the *Lac Lanoux* case related to the exploitation of natural resources rather than to the protection of the environment. In effect, hydroelectric interests versus agricultural interests formed the background to the dispute. While the French government planned to divert water to generate electric power, the Spanish government was concerned about the possible adverse impact of such a diversion on Spanish

[8] Official Opinions of the Attorneys-General of the United States, Advising the President and Heads of Departments in Relation to Their Official Duties, Vol. XXI, Treaty of Guadalupe Hidalgo - International Law, Opinion by Judson Harmon, at 274-283.

[9] *Affaire du Lac Lanoux*, XII *United Nations Reports of International Arbitral Awards*, at 285-317; *Lake Lanoux Arbitration* (English translation) 24 *International Law Reports* (1957), at 105-142.

[10] John G. Laylin and Rinaldo L. Bianchi, 'The Rôle of Adjudication in International River Disputes. The Lake Lanoux Case', 53 *American Journal of International Law* (1959) 30-49, at 37.

agriculture. From the legal point of view, France relied on its right to use its natural resources, while Spain argued that the French project required prior agreement between the two governments.

By way of a dictum, the tribunal stated that there existed a rule prohibiting an upper riparian state from altering the waters of a river in circumstances calculated to do serious injury to the lower riparian state. As Spain was not able to submit evidence showing any injury there was no need for the tribunal to consider what would amount to so-called serious injury. Thus, that threshold was left undecided.

Regulating Boundary Waters

In view of the inherent international aspect of boundary waters, it was natural that states began to regulate the use of such waters through bilateral and multilateral agreements. The general purpose of boundary water treaties was to prevent disputes by reconciling the various interests of riparian states. This objective is explicitly stated in the Preamble of the 1909 Boundary Waters Treaty between Canada and the United States, according to which the aim of the treaty is:

> to prevent disputes regarding the use of boundary waters and to settle all questions which are now pending . . . and to make provision for the adjustment and settlement of all such questions as may hereafter arise.[11]

In the same vein, the ruling by the Permanent Court of International Justice in the *Case Concerning the Diversion of Water from the River Meuse* throws light on the distinction between dispute settlement and the regulatory approach. [12] The Court found that a treaty dating from 1863 between the Netherlands and Belgium was 'an agreement freely concluded between two States seeking to reconcile their practical interests with a view to improving an existing situation rather than to settle a legal dispute concerning mutually contested rights.'[13] Thus, the essence of the 1863 treaty was to regulate practical interests in order to prevent disputes.

H.A. Smith emphasizes the need for a regulatory approach in his famous work on the economic uses of international rivers.[14] He points out that in many cases a river system can present complex questions because the use of its waters is demanded simultane-

[11] Treaty between Great Britain and the United States Relating to Boundary Waters, and Questions Arising between the United States and Canada, Washington, D.C., 11 January 1909, reproduced in *United Nations Legislative Series*, Legislative Texts and Treaty Provisions Concerning the Utilization of International Rivers for Other Purposes than Navigation, UNLS ST/LEG/SER.B/12 (1964), at 260.

[12] *Supra* note 6.

[13] *Ibid.*, at 20.

[14] Herbert Arthur Smith, *The Economic Uses of International Rivers* (1931), at 1-13.

ously for navigation, irrigation, electric power and the supply of large cities, and he specifies that the function of law is 'to provide rules for settling the possible conflict of interests'[15] by aiming to strike an equitable balance between them. Berber too argues in favour of treaty-making which, according to him, represents the highest form of political wisdom. Noting the rudimentary, vague, and developing character of international water law, he contends that 'the conclusion of specific and specialised water treaties remains far and away the best solution.'[16]

In order to regulate the various interests concerned, states concluded many watercourse treaties from the beginning of the 19th century up to World War II. In exceptional cases states established joint jurisdiction or agreed on common use with regard to a particular watercourse. More often, substantial regulations concerning the navigational and non-navigational uses of boundary waters were drawn up.

States have been particularly eager to conclude agreements to safeguard the freedom of navigation. Furthermore, states have established international bodies to deal especially with navigational interests. The first international waterway administration was established in 1804 to deal with navigation on the Rhine River. A general declaration on the freedom of navigation was made by the Treaty of Paris in 1814. Subsequently, in 1821 a river commission was established to oversee navigation of the Elbe. Internationalization was pushed further by the 1856 Treaty of Paris which established the European Danube Commission consisting not only of representatives of riparian states but also of non-riparian states.[17] Following the model of the Danube administration, the International Commission for the Navigation of the Congo was established in 1885. After World War I, the freedom of navigation of the important European rivers was confirmed by the Treaty of Versailles. For example, Article 291 declares the Danube an international river. Finally, under the auspices of the League of Nations, the Statute on the Régime of Navigable Waterways of International Concern was adopted at Barcelona in 1921.[18] The Statute defines as navigable waterways of international concern all parts of a waterway which separate or traverse different states and which are naturally navigable to and from the sea.

Turning to non-navigational uses of boundary waters, already prior to the Second World War, states concluded a number of bilateral and multilateral treaties. While some of the treaties regulated utilization in general terms, others regulated such traditional uses as irrigation, fishing and the floating of timber. After the Industrial Revo-

[15] *Ibid.*, at 13.

[16] Berber, *Rivers*, *supra* note 4, at 270.

[17] Articles XVI-XVII, General Treaty for the Re-Establishment of Peace between Austria, France, Great Britain, Prussia, Sardinia and Turkey, and Russia, Paris, 30 March 1856, 114 *Consolidated Treaty Series* 409.

[18] Statute on the Régime of Navigable Waterways of International Concern, Barcelona, 20 April 1921, 7 *League of Nations Treaty Series* 50.

lution, it was recognized that regulations should be extended to cover modern uses of boundary waters. To this end, bilateral agreements were concluded in order to impose detailed regulations on, for example, the use of hydro-electric power, the size of a dam to be constructed in a boundary water or the volume of water to be diverted for mining or industrial purposes. Moreover, in 1923, a multilateral treaty called the Convention Relating to the Development of Hydraulic Power Affecting More than One State was concluded.[19]

During the late 19th century and early 20th century, environmental issues and problems were not perceived to be very important and only a few boundary water treaties imposed regulations aimed at preventing pollution.[20] As the recognition of freshwater pollution problems increased there was a need to widen the scope of water agreements. Furthermore, it was understood that there was a need to comprehensively regulate a hydrologic unit. Thereby, the process of internationalization was broadened from only regulating boundary waters to also controlling watercourses of international concern.

In the 1960s and 1970s, several bilateral and multilateral treaties were concluded to protect regional watercourses. For example, regulations were issued to protect Lake Constance, [21] the Mosel,[22] the Rhine[23] and the Great Lakes.[24] These regulations set specific water quality objectives or emission limits or alternatively established joint bodies under which specific regulations could be determined. Thus, the emphasis was placed upon waters crossed boundaries rather than waters which formed boundaries. To emphasize this aspect, international instruments began to refer to transboundary or international waters rather than to boundary or frontier waters.

[19] Convention Relating to the Development of Hydraulic Power Affecting More than One State, Geneva, 9 December 1923, 36 *League of Nations Treaty Series* 76.

[20] Only few treaties imposed limitations upon the use of waters in order to avoid pollution. See, for example, second paragraph, Article IV, 1909 Boundary Waters Treaty, *supra* note 11 : 'It is further agreed that the waters herein defined as boundary waters and waters flowing across the boundary shall not be polluted on either side to the injury of health or property on the other.'

[21] Convention on the Protection of the Waters of Lake Constance Against Pollution, Paris, 16 November 1962, 620 *United Nations Treaty Series* 191.

[22] Protocol Concerning the Constitution of an International Commission for the Protection of the Mosel against Pollution, Paris, 20 December 1961, 940 *United Nations Treaty Series* 211.

[23] Agreement Concerning the International Commission for the Protection of the Rhine against Pollution, Berne, 29 April 1963, 994 *United Nations Treaty Serries* 3; Convention for the Protection of the Rhine against Chemical Pollution, Bonn, 3 December 1976, 16 *International Legal Materials* (1977) 265.

[24] Agreement between the United States of America and Canada on Great Lakes Water Quality, Ottawa, 22 November 1978, reprinted in Philippe Sands, *Principles of International Environmental Law*, Vol. IIA (Cambridge University Press, 1995), at 559.

Management of international watercourses

While the doctrine of sustainable development gained worldwide acceptance after the Brundland Commission's 1987 Report *Our Common Future*[25] and the 1992 Rio Conference, its seeds germinated and grew from early attempts to manage natural resources. In the water context, the doctrine of reasonable and equitable utilization represents such an early attempt.

The principle of reasonable and equitable utilization began to develop in the beginning of the 20th century. The indeterminacy of absolute sovereignty in the settlement of international disputes led to bilateral and multilateral agreements on the use of boundary waters based on the principle of equitable utilization.[26] The development of the principle highlighted a need to manage international watercourses by optimizing long-term interests and short-term needs and by taking into account all relevant factors and reaching a conclusion on the basis of the whole.[27]

In his work *The Economic Uses of International Rivers*, H. A. Smith notes that in view of various interests it may be complex in a concrete case to determine which of these prevail.[28] He points out that conflicts of interest between states should be appraised taking into account the wider community to which states belong. In the same vein, when considering the principles governing international fluvial law, the Permanent Court of International Justice in the *River Oder* case stated as follows:

> [The] community of interest in a navigable river becomes the basis of a common legal right, the essential features of which are the perfect equality of all riparian States in the use of the whole course of the river and the exclusion of any preferential privilege of any one riparian State in relation to the others.[29]

From the doctrinal point of view, the concept of equitable utilization did not necessarily mean equal division or 'mathematical equality',[30] but rather equality of rights.[31]

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[25] World Commission on Environment and Development, *Our Common Future* (Oxford University Press, 1987), UN Doc. A/42/47 (1987)(Brundtland Report).

[26] See, for example, Treaty between the United States of America and Mexico Relating to the Utilization of the Waters of the Rio Grande (Rio Bravo) from Fort Quitman, Texas, to the Gulf of Mexico, Washington, D.C., 14 November 1944, *United Nations Legislative Series* ST/LEG/SER.B/12 at 236.

[27] See Preamble, Article 6 and Article 24(2), Non-navigational Convention, *supra* note 3.

[28] Smith, *International Rivers*, *supra* note 14.

[29] *Case Relating to the Territorial Jurisdiction of the International Commission of the River Oder*, PCIJ Series A, No. 23 (1929) at 27.

[30] Martti Koskenniemi, 'International Pollution in the System of International Law', XVII *Oikeustiede-Jurisprudentia* (1984) 91-181, at 154.

[31] See Stephen M. Schwebel, Special Rapporteur, 'Third report of the law of the non-navigational uses of international watercourses', *Yearbook of the International Law Commission* 1982, Vol. II (Part One), Document A/CN.4/348, para. 47 (footnote omitted): 'In short, disputes over the right to use waters flowing across sovereign lines must be adjusted on the basis of "equality of rights". But such equality does not necessarily mean equal division.'

According to Jerome Lipper, the principle of equitable utilization means that a riparian state cannot deprive another riparian state's right to an equitable share of the natural resources of an international watercourse.[32]

In 1966, the International Law Association adopted the Helsinki Rules on the Uses of the Waters of International Rivers as a statement of existing rules of international law.[33] According to Article IV of the rules:

> Each basin State is entitled, within its territory, to a reasonable and equitable share in the beneficial uses of the waters of an international drainage basin.[34]

What amounts to a reasonable and equitable share is, pursuant to the Helsinki Rules, 'to be determined in the light of all the relevant factors in each particular case.'[35] The rules specify relevant factors by providing a non-exhaustive list. For instance, the economic and social needs of each basin state as well as the avoidance of unnecessary waste in the utilization of waters of the basin shall be considered.[36] Also, use of the waters by a basin state that causes pollution resulting in injury in a co-basin state must be considered from the overall perspective of what constitutes equitable utilization.[37] Thus, the idea of equitable sharing is not to provide an identical share but rather 'to provide the maximum benefit to each State from the uses of the waters with the minimum detriment to each.'[38]

The principle of equitable and reasonable utilization was subsequently codified in the 1997 Convention on the Law of the Non-navigational Uses of International Watercourses. According to the key provision in Article 5:

> Watercourse states shall in their respective territories utilize an international watercourse in an equitable and reasonable manner. In particular, an international watercourse shall be used and developed by watercourse States with a view to attaining optimal and sustainable utilization thereof and benefits therefrom consistent with adequate protection of the watercourse.

Along with the emergence of the doctrine of sustainable development, the concept of sustainable use of international watercourses was generally accepted. Chapter 18 of Agenda 21 deals with integrated approaches for the development, management and

[32] Jerome Lipper, 'Equitable Utilization', in A.H. Garretson, R.D Hayton, C. J. Olmstead (eds), *The Law of International Drainage Basins* (Oceana Publications: New York, 1967) 15-88, at 43.

[33] Helsinki Rules on the Uses of International Rivers, *International Law Association Reports* (1966) 477-532.

[34] *Ibid.*, at 486.

[35] Article V(1), *ibid.*, at 488.

[36] Article V (2), *ibid.*

[37] Article X, *ibid.*, at 496-497.

[38] See the commentary of Article IV, *ibid.*, at 487.

use of water resources. In 2001, the United Nations Environment Programme (UNEP) Governing Council adopted the UNEP Water Policy and Strategy. [39] Furthermore, since the 1990s most of the new freshwater agreements recognize, as Birnie and Boyle put it, 'in some form the importance of sustainable development, sustainable use, or sustainable management as an aim or objective.'[40] Several regional conventions serve as examples of this.[41]

Another important development relates to environmental regime-building. In pursuit of long-term environmental goals, from the 1970s onwards many regimes began to design step-by-step interim objectives, usually through separate annexes or protocols. The same development occurred also in the water field. Several watercourse agreements include detailed annexes subject to constant amendments. In addition, some watercourse agreements serve as framework conventions in two different ways. First, some agreements have adopted separate protocols on particular subjects.[42] Second, some conventions give an incentive or even oblige riparian states to conclude bilateral or regional agreements.[43]

The purpose of regime-building in the water sector has been to establish dynamic processes and frameworks under which normative regulations and scientific expertise would develop in synchronism. Through the partnership between policy and science, water regimes seek to manage on a long-term basis potential adverse effects and to reconcile economic interests and environmental concerns.

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[39] See the article by Niels Ipsen and Marko Berglund in the present Review.

[40] Patricia Birnie and Alan Boyle, *International Law & the Environment* (2nd ed., Oxford Univesity Press, 2002), at 316-317.

[41] See, for example, Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki, 17 March 1992, in force 6 October 1996, 31 *International Legal Materials* (1992) 1312, www.unece.org/env/water/text/text.htm (UNECE Convention); Convention on Co-operation for the Protection and Sustainable Use of the Danube River, Sofia, 29 June 1994, in force 22 October 1998, *Official Journal* L342, 12 December 1997, at 18; Agreement on Co-operation for the Sustainable Development of the Mekong River Basin, Chiang Rai, 5 April 1995, 34 *International Legal Materials* (1995) 865, www.mrcmekong.org/pdf/95%20Agreement.pdf ; Protocol on Shared Watercourse Systems in the Southern African Development Community, Johannesburg, 28 August 1995, ocid.nacse.org/qml/research/tfdd/toTFDDdocs/205ENG.htm; Convention on the Protection of the Rhine, 12 April 1999, *Official Journal* L289, 16 November 2000.

[42] A good example of this is the UNECE Convention, *supra* note 41. So far, Parties to the Convention have adopted the following protocols: Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, London, 17 June 1999, 38 *International Legal Materials* (1999) 1708, www.unece.org/env/water/text/text_protocol.htm; Protocol on Civil Liability and Compensation for Damage Caused by the Transboundary Effects of Industrial Accidents on Transboundary Waters to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes and to the 1992 Convention on the Transboundary Effects of Industrial Accidents, Kiev, 21 May 2003, www.unece.org/env/civil-liability/welcome.html.

[43] See Article 9, UNECE Convention, *supra* note 41; and Articles 3 and Article 4 of the Non-navigational Convention, *supra* note 3.

With the emergence of the doctrine of sustainable development, water protection and utilization of waters are sought to be managed under the same framework. However, even though the doctrine of sustainable management is able to reconcile the protection and utilization of watercourses, the tension between them remains.

Conclusions

Even though some of the above doctrines are discussed separately as an attempt to understand them more thoroughly, this does not mean that the doctrines are also functionally separate. On the contrary, doctrines and concepts discussed under the dispute settlement, regulatory and management approaches are in a number of instances interlinked. Take, for example, the recent *Case Concerning the Gabčikovo-Nagymaros Project* before the International Court of Justice.[44] The case reflects prima facie general international law because Hungary and Slovakia resorted to traditional dispute settlement in order to solve their bilateral dispute. Looking at the case more closely one can, however, also distinguish regulatory themes. For instance, the case concerned a 1977 boundary waters treaty between the two parties[45] which was concluded for the development of 'water resources, energy, transport, agriculture and other sectors of the national economy.'[46] Moreover, the parties committed themselves 'to ensure that the quality of water in the Danube was not impaired as a result of the Project.'[47] Furthermore, one can label many arguments by the parties as reflecting the management approach. For example, parties referred to ecological risks,[48] scientific evidence[49] and the precautionary principle.[50]

In the same vein, the judgement of the Court reflects different themes. For instance, the Court applied the doctrine of state responsibility and other classical legal methods and techniques. The judgement can also said to be based on the regulatory approach in view of the fact that the Court urged parties to negotiate to ensure the achieve-

[44] *Gabčíkovo-Nagymaros Project (Hungary/Slovakia)*, *ICJ Reports* (1997) 7, www.icj-cij.org/icjwww/idocket/ihs/ihsjudgement/ihs_ijudgment_970925_frame.htm. For discussion see, for example, Charles B. Bourne, 'The Case Concerning the Gabčíkovo-Nagymaros Project: An Important Milestone in International Water Law', 8 *Yearbook of International Environmental.Law* (1997) 6; Alan E. Boyle., 'The Gabčíkovo-Nagymaros Case: New Law in Old Bottles', 8 *Yearbook of International Environmental.Law* (1997) 13; Peter H. F. Bekker, 'Gabčíkovo-Nagymaros Project', 92 *American Journal of International Law* (1998) 273.

[45] Treaty Concerning the Construction and Operation of the Gabčíkovo-Nagymaros System of Locks, 16 September 1977.

[46] *Gabčíkovo-Nagymaros Project*, supra note 44, at para. 15.

[47] *Ibid.*

[48] *Ibid.*, at para. 40.

[49] *Ibid.*, at para. 54.

[50] *Ibid.*, at para. 97.

ment of the objectives of the 1977 treaty, in accordance with such modalities as they may agree upon. In addition, the judgment reflects the management approach. For example, the Court noted that the need to reconcile economic development with the protection of the environment 'is aptly expressed in the concept of sustainable development.'[51] Furthermore, the Court referred to the principle of equitable and reasonable utilization of international watercourses and noted that '[r]e-establishment of the joint régime will also reflect in an optimal way the concept of common utilization of shared water resources.'[52]

In light of the above, the categorization of the relevant water issues into three approaches – general international law, the regulatory approach and the management approach – represents three contextually different ways into which water related materials can be arranged. Even though the management approach seems to be dominating at present, general international law and the regulatory approach are equally relevant.

[51] *Ibid.*, at para. 140.

[52] *Ibid.*, at para 147.

INTEGRATED WATER RESOURCES MANAGEMENT
INTERNATIONAL FRESHWATER AGREEMENTS AND NATIONAL WATER POLICY AND LAW REFORMS[1]

Niels Ipsen[2] *and Marko Berglund*[3]

Introduction

The first part of this article addresses the rights and responsibilities of states as developed in international freshwater agreements. The recent Atlas of International Freshwater Agreements[4] documents the numerous agreements and conventions relating to international watercourses and provides a starting point for a comprehensive inventory of such agreements. The influence and opportunities related to agreements adopted at the regional or sub-regional level are also viewed. The second part presents how the principles of integrated water resources management can be included in modern water policies and legal frameworks at the national level. Finally, the Water Policy and Strategy of the United Nations Environment Programme (UNEP) is presented.

[1] This paper was developed from a lecture given by Niels Ipsen on 27 August 2004.

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[4] United Nations Environment Programme, *Atlas of International Freshwater Agreements* (UNEP, 2002), www.unep.org/Documents.Multilingual/Default.asp?DocumentID=67&ArticleID=3813&l=en.

International Freshwater Agreements

International agreements

The importance of shared international watercourses and basins cannot be overemphasized. The 263 rivers which cross or demarcate political boundaries account for 50% of the Earth's land surface and 60% of the total freshwater flow. Forty percent of the Earth's population lives in a basin shared by two or more countries. Sharing river basins can lead to problems, including conflicts between upstream and downstream users on abstraction, pollution, environmental damage, etc. The fact that catchments do not coincide with national borders makes it necessary for countries to solve problems through international law and local agreements. This is not a new phenomenon. Thus, there is a multiplicity of legal texts covering international watercourses, with an estimated 2000 active agreements. Since 1945, around 300 treaties on water management have been established. However, most of these agreements address specific issues such as co-managing a dam for hydropower, particular basin-wide development projects etc. and only the most recent ones take into account the challenges of competing uses of scarce water resources, pollution or environmental damage.

An analysis of the existing agreements is under way with a view to creating a compendium of key provisions included in existing multilateral agreements. Compiling such a document will help guide drafters in formulating future conventions. To this end, in 2002, UNEP introduced the Atlas of International Freshwater Agreements which documented the world's international river basins and their related agreements.[5] The Atlas is linked to an electronic database of available texts, and begins a discussion on the complexities of transboundary water management.

At the global level, international water law has continuously been developed since the Second World War. The Helsinki Rules on the Uses of the Water of International Rivers were adopted by the International Law Association in 1966.[6] It put forward the principle of equitable utilization and held that upstream states should refrain from causing substantial injury to downstream states. In 1992, the United Nations Conference on Environment and Development broached the issue and highlighted the importance of water. Chapter 18 of Agenda 21 is dedicated to the use of water and advocates integrated water resources management.[7] In 1997, the UN Convention on the Law of Non-navigational uses of International Watercourses was adopted.[8]

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[5] *Ibid.*

[6] The Helsinki Rules on the Uses of the Waters of International Rivers, Helsinki 1966, (International Law Association: London, 1967), www.internationalwaterlaw.org/IntlDocs/Helsinki_Rules.htm.

[7] United Nations Conference on Environment and Development (UNCED), *Agenda 21: Environment and Development Agenda*, UN Doc. A/CONF.151/26, www.un.org/esa/sustdev/documents/agenda21/index.htm

[8] Convention on the Law of the Non-navigational Uses of International Watercourse, New York, 21 May 1997, not yet in force, 36 *ILM* (1997) 700, www.un.org/law/ilc/texts/nonnav.htm

When developing a new agreement relating to international watercourses, a first step would be to take under consideration the 1997 Convention as well as the three pillars of sustainable development: social development, economic development and environmental protection. The drafters of any such new agreement should look through this double filter, comparing the agreement's provisions to the UN Convention and the pillars of sustainable development, and assess what is needed. Using the UN Convention as a starting point, drafters should look at what provisions might be expected in an ideal agreement. A list of principles, linked to specific articles, that should be supported by the terms of an agreement includes:

First, basin-wide agreements should be strived at. The definition of an international water system is crucial and should be as precise as possible. It should include all surface waters, including rivers, lakes and tributaries. The question of subsurface waters and ground water needs to be resolved and the issue of surrounding ecosystems and whether they should be included needs to be addressed.

Second, provisions which allocate the costs and benefits of the utilization of international watercourses should be addressed. The need for the distribution of costs and benefits becomes apparent when addressing the use of natural resources or hydroelectric projects, for example. The user/polluter pays principles should be applied as far as possible and liability rules for environmental or other harm should be established. Adjustments for capacity should be made and the idea of differentiated responsibilities should be adhered to.

Third, the principle of equitable utilization and participation should be applied. Optimal and sustainable use should be aimed at. Participation with a right to utilize the waters of international watercourses should be guaranteed and a duty to co-operate in the protection and development of those watercourses should be established. These should be based on equality of access, the social and economic needs of the states concerned, the existing and potential uses of the resources, the availability of alternatives and the need for consultation.

Fourth, the obligation not to cause harm should be consolidated. The harm in question must be significant and deal with the transboundary effects of use in one riparian state on other riparian states. In cases of unexpected harm, methods of notification should be set up within agreements to improve the flow of information and provide for an early warning system.

Fifth, a mechanism for the fast and efficient exchange of information should be set up. There should be regular exchanges of available data and an obligation to notify of planned measures. Adequate notice should be guaranteed to give time for a response. The opportunity for consultation or negotiation should be made available. A procedure for the appeal on reasonable belief of significant adverse effects should be established.

Sixth, a transboundary political forum, a river basin commission for example, should be envisaged. To this end, a management or monitoring authority could be established

if deemed required. In this case, the authority of such bodies over the parties must be decided, as must their competences. A central question here is how much of a state's sovereignty is released to the river basin authority.

Seventh, conflict resolution mechanisms need to be established. At the least, these should include the classic conflict resolution methods of consultation and negotiation. If agreed to by the parties, arbitration or the search for a legal remedy in international courts could be resorted to. The question of state responsibility for harm by private entities to other states and of responsibility for transboundary harm to private interests should be resolved. Penalties for violation may be set up and compensation decided on.

Having developed the Atlas on Freshwater Agreements,[9] UNEP is looking to continue its work in this area by developing generic draft framework provisions based on the principles set forth in the UN Convention and using successfully applied examples from existing agreements. Similarly, example river basin authorities and formats to follow when drafting future agreements will be provided.

Agreements at the regional or the sub-regional level

Regional or sub-regional agreements or protocols may become important drivers in implementing international water law at the basin level. The Southern African Development Community (SADC) Protocol on Shared Watercourses is an example of such a sub-regional framework agreement.[10] The Protocol was signed in 1995 and ratified in September 1998. A Revised Protocol, signed in 2000, entered into force on 22 September 2003.[11] The Protocol covers the 14 member countries of the SADC and sets out principles for the joint management of river basins shared by two or more countries.

The provisions of the Protocol call for the harmonized use of water resources. The parties are called on to maintain a balance between development and environment, and thereby aim towards the goal of sustainable development. The parties are called on to observe the objectives of regional integration and respect international water law. The watercourses in question should be utilized in an equitable and sustainable manner. Measures need to be planned in conformity with a set procedure. Parties should work to prevent the causes of harm and fight to mitigate its effects. Access to the legal system for individuals whose rights have been affected should be granted. Reasonable regard to

[9] UNEP, *International Freshwater Agreements*, *supra.* note 4

[10] Protocol on Shared Watercourse Systems of the Southern African Development Community, Johannesburg, 28 August 1995, in force 29 September 1998, ocid.nacse.org/qml/research/tfdd/toTFDDdocs/205ENG.htm.

[11] Revised Protocol on Shared Watercourses of the Southern African Development Community, Windhoek, 7 August 2000, in force 22 September 2003, 40 *International Legal Materials* (2001) 321, ocid.nacse.org/qml/research/tfdd/toTFDDdocs/208ENG.htm.

the rights and legitimate expectations of other states should be given. Ecosystems and the aquatic environment should be protected and preserved. Moreover, parties should strive to resolve all disputes amicably.

The Protocol further calls for the following actions to be undertaken by the parties. They should pursue and establish co-operation on projects and exchange information and data. Parties should notify of planned measures, although urgent implementation without notice may be allowed. The Protocol calls for parties to prevent, reduce and control pollution and environmental degradation. The introduction of alien species should be prevented. Parties should respond to the needs of the parties with regards to the regulation of flows. Installations, facilities and works should be maintained and protected. A permit or authorisation system for non-domestic uses should be introduced, particularly relating to waste discharge into waters. Parties are called upon to notify of emergency situations and refer disputes that cannot be resolved amicably to the SADC Tribunal.

The Protocol empowers watercourse states to enter into basin agreements that apply the provisions of the Revised Protocol. Moreover, it prohibits watercourse states from entering into agreements about particular waters unless they have obtained consent from an affected state. Finally, the Protocol requests riparian states to establish institutions such as watercourse commissions, water authorities or other boards, as may be determined.

A review of the implementation of the SADC Protocol took place in 2003. It showed that agreements are gradually being established for the region's shared basins. Furthermore, all new agreements have been formulated in accordance with the Protocol's provisions and the revision of existing agreements has moved these in the direction of the Protocol's goals and provisions. Several countries are in the process of adapting institutional structures to cope with international issues. The SADC has played an important role in overseeing the implementation of the Protocol among the parties and has provided support and guidance to these. In some respects, the provisions of the Protocol have become the language of discussing transboundary issues.

Water Policy and Law Reforms

It is widely agreed that integrated water resources management (IWRM) forms the overall framework for water management, including for agreements related to international watercourses as well as for management at the national and local levels. It is a comprehensive management concept which aims to take under consideration the numerous and diverse elements which affect sustainable water management. It covers wider policy issues, the legal and institutional framework as well as more detailed management instruments which are used to implement the scheme. Integrated water resources management is a process that begins with an analysis and reform of the enabling environment. This basically is the international, national, provincial or local

policies and legislation that constitute the rules of the game and enables all the institutions and stakeholders to play their respective roles. A proper enabling environment is essential to ensure both the rights and assets of all stakeholders, from individuals and public organizations to private sector companies, as well as to protect public assets and intrinsic environmental values.

Water policy

Integrated water resources management begins with the development of a policy, which can be translated as a government's vision of where to go and how to get there. As policy concerns the day to day lives of people, its aims and goals should be shared by a country's citizens. Policies work by acting as a framework within which, in this case, water resources are managed. This strategic game plan usually covers the use, allocation and conservation of resources as well as environmental protection. Policies also set wider objectives, priorities and principles for the management of the quantity and quality of water resources, both surface and ground water, as well as coastal and fresh water.

Having decided on a policy, a government then translates this into laws and regulations putting into place the desired regime. Legislation consolidates policy and aims to avoid negative externalities and conflicts over use in different sectors and between upstream and downstream users. There is a multi-tiered hierarchy within policy-implementing legislation, ranging from the global to the local. Global agreements head the hierarchy in front of regional and sub-regional agreements. Basin agreements follow, with national water law and regulations and by-laws coming next. Local regulations come at the bottom of the hierarchy.

Although policy statements relating to water resources exist in many countries, these are often scattered in different documents. These may include acts, regulations and action/master plans. Legal provisions exist, but are often developed independently of each other, depending on their precise content. Water acts may be supplemented by coastal acts and land use acts, for example. The policies and laws of different sectors such as agriculture and health may also separately address the issue of water.

The shortcomings of this lack of an integrated approach are further compounded by the fact that if a water policy and/or law are in place, they often only concern the water supply and do not address management of the resource. Moreover, where there is a coastal zone management policy, it often only concerns the physical planning of the coastal zone and the exploitation of marine resources. The lack of coherence between interrelated issues and policies and the resulting weak enforcement is evident. What is needed, then, is a coherent set of policies and legal acts addressing issues related to water resources, both fresh and salt water, in a comprehensive manner. These policies must furthermore have the support of the populations which they affect.

New legal frameworks shall ideally constitute an overall policy framework taking into account international conventions, national constitutions, government statutes and

sector policies. The process should incorporate consultations and seek consensus with all line ministries and organizations relevant for the management of water. Vice versa, when formulating new development policies for other sectors, water resource policy statements should be taken into account where relevant. Policy statements must be clear and realistic. Care should be given to the fact that good intentions reflected in vague statements such as 'No pollution of surface waters shall occur' will never be applicable.

The statements contained in policy documents need to have a relatively long life as they must pass a laborious political adaptation process. Detailed guidelines which may need recurrent adaptation to the country's actual development level should be avoided and placed into the more dynamic parts of the legislative system. Examples of overall policy statements include determination of who owns the water, i.e. the state or the people, or whether some water is private and some public. Other key issues to be decided include whether water is a human right or a free commodity, for example. Overall allocation priorities must be decided and should cover domestic needs, economic activities, issues related to the environment and international obligations. The question of equity must be addressed.

The guiding principles of policy documents operationalize political intentions by setting a more detailed conceptual framework supporting overall policy objectives. Some of the more conceptual statements which apply to integrated water resources management are found in the four Dublin Principles.[12] According to these, fresh water should be seen as a finite and vulnerable resource, water development and management should be based on a participatory approach, women play a central part in the provision, management and safeguarding of water, and water has an economic value in all its competing uses and should be recognized as an economic good.

Some of the more detailed guiding principles behind IWRM hold that land and water should be managed together based on catchment and river basin boundaries. Moreover, land and water should be managed at the lowest appropriate level. The private sector has an important role in water resources management and its potential should be harnessed in this respect. Some of the more general environmental law principles already adopted by the international community are also present in the IWRM concept. These include the precautionary principle and the user pays and polluter pays principles. Furthermore, it is important to apply realistic standards and regulations and to balance economic and regulatory instruments. Open access to information on water should be given and international co-operation on water pollution control should be promoted.

[12] International Conference on Water and the Environment, 26-31 January 1992, The Dublin Statement on Water and Sustainable Development, Guiding Principles, www.wmo.ch/web/homs/documents/english/icwedece.html.

One of the key elements of IWRM is the integration of the various elements and actors into a comprehensive all-encompassing system. This means the integration of freshwater and coastal zone management as well as of land and water use. Surface water and ground water should be managed in an integrated manner as should water and wastewater. The parallel issues of water quality and quantity should be integrated into management as should upstream and downstream water-related interests. National policy development requires cross-sectoral integration. Finally, all relevant stakeholders should be integrated in planning and decision-making processes.

Having established a policy framework, national legislation should be put into place to implement this strategy. National legislation clarifies the entitlements and responsibilities of the state, users and providers, as well as the role of the state vis-à-vis other stakeholders. It formalizes the process of water allocations and provides legal status for the various water user groups and ensures the sustainability of water resources. National laws usually come either in the form of framework legislation or full prescriptive legislation. As with other framework legislation, framework water legislation sets the ground rules and leaves the details to regulations which can be changed administratively. Full prescriptive legislation, on the other hand, sets detailed rules and requires parliamentary approval for changes. Although the choice depends on legal tradition, the dynamic process thinking behind IWRM is easier to provide for within a framework legislation approach.

New elements are being introduced in modern IWRM-based water law. These include the definition of priorities and overall principles for water allocation as well as for the protection of water and water-related ecosystems. Basins are being defined as the units of management. Institutional management frameworks are being defined and national water councils or basin committees are being instituted to deal with cross-sectoral management. Water action plans – or IWRM plans – are being legally instituted as a mechanism for continuous adaptation of institutional and technical capacity to respond to actual requirements.

Realistic and enforceable regulations are being defined based on IWRM planning processes. The water action plan identifies and prioritizes issues for management. It analyzes different options for regulating priority issues, including non-legal instruments, and it takes into account capacity constraints in the proposed regulatory mechanisms. However, it should be noted again that the transition towards IWRM is a medium- to long-term process and that the context is very different in different countries. For example, reform processes in developed countries begin in existing complex administrative environments while many developing countries are only at an initial stage in developing their administration.

Moreover, a number of implementation difficulties arise when trying to apply the IWRM principles. These include inter alia the invocation of prior water rights, the lack of technical capacity in developing countries for creating basin and catchment agencies for example, the logistics involved in extensive stakeholder participation, and in

particular the will for true co-ordination between the various sectors involved. Moreover, there are methodological issues related to the definition of ecosystems water needs, the economic valuing of water uses, and the administrative constraints for integrated land and water management, for example.

IWRM is a new concept and experience with its actual implementation at the national level is still limited. As is the case for international agreements, concrete experience in implementation is needed to find practical solutions on the ground. It is therefore important that such experience is effectively exchanged and disseminated through intergovernmental collaboration bodies, education systems and networks, international support organizations, etc.

UNEP Water Policy and Strategy

UNEP is one of the international organizations which have put water and its management high on the agenda. As an illustration of this, in 2001 UNEP Governing Council adopted the UNEP Water Policy and Strategy (WPS).[13] It sets the following goals and focal areas in line with the internationally expressed needs for support within environmentally sustainable water management:

UNEP WPS Goals are: achieving greater global understanding of freshwater, coastal and marine environments by conducting environmental assessments in priority areas; raising awareness of the importance and consequences of unsustainable water use; supporting the efforts of Governments in the preparation and implementation of integrated management of freshwater systems and their related coastal and marine environments; providing support for the preparation of integrated management plans and programmes for aquatic environmental hot spots and; promoting the application by stakeholders of precautionary, preventive and anticipatory approaches.

UNEP WPS Focal Areas are: freshwater scarcity and water conflicts between human activities and aquatic ecosystems; land-based sources of pollution and alteration of habitats, and their impacts on aquatic ecosystems; aquatic biological diversity; resource use and management planning in harmony with economic and social development and; knowledge and technology transfer in integrated management.

The policy and strategy document, which also provides detailed outputs and descriptions of UNEP's water related projects and programmes, is subject to updates and revisions to take into account new conceptual and political developments, as well as the need for support in countries and regions. The next update will be adopted at UNEP Governing Council in March 2005.

[13] See www.unep.org/dpdl/water/index.asp.

WATER CO-OPERATION BETWEEN FINLAND AND RUSSIA ON THE LOCAL AND REGIONAL LEVEL[1]

Anna-Liisa Tanskanen[2]

Background

Neighbouring area co-operation has formed an integral part of Finland's foreign policy and economic co-operation since 1990. After Finland joined the European Union (EU) in 1995, cross-border co-operation increased and strengthened at the regional and local levels. One reason for this was the adoption of the subsidiarity principle in the implementation of regional development programmes which increased the power of regions. A common body dealing with issues in the Finnish-Russian border regions was established in the late 1990s. The area covered by this body includes eastern Finland and the Republic of Karelia, an autonomous republic in the Russian Federation. This area is called Euregio Karelia.[3] The Euregio Karelia framework comprises border region co-operation in the fields of business, the environment, tourism and culture, and promotes development of living conditions in bordering regions with a common cultural and natural heritage.

Euregio Karelia is formed of the provinces of North Karelia, Kainuu, and Northern Ostrobothnia on the Finnish side, and the Republic of Karelia on the Russian side. Euregio Karelia is currently the only Euregio which extends outside the borders of the European Union. The length of the common border between the Russian Federation and Finland is approximately 1300 kilometres; the length of this border within in Euregio Karelia is 700 kilometres. The total surface area of Euregio Karelia is about 236 700 km^2, of which the Republic of Karelia covers two-thirds. The total population of the Euregio Karelia is approximately 1 400 000, of which 770 000 live in the Republic of Karelia.

[1] This paper is based on a lecture given by the author on 27 August 2004.

[2] EU Co-ordinator, North Karelia Regional Environment Centre.

[3] The Euregio scheme was set up by the EU to increase cross-border co-operation between EU countries.

In practice, the actual political power of Euregio Karelia is minimal and national legislation remains valid. Thus, governmental agreements and the strategy of the Ministry of the Environment of Finland with regard to co-operation in neighbouring areas also form the framework for regional level environmental co-operation. In 2004, the Finnish Government adopted a new strategy on co-operation with neighbouring areas. Currently Finland's priority sectors in neighbouring area co-operation with the Russian Federation include decreasing nuclear and environmental risks, stabilizing democracy and promoting a constitutional state, promoting the renewal of administration and legislation and promoting economic reform. Effective cross-border co-operation links government level co-operation and strategies to local and regional level co-operation, improving social and economic development and environmental protection in border areas.

Common nature, different problems

North Karelia in eastern Finland and the Republic of Karelia are peripheral regions, where natural resources have traditionally played an important role in the regional economies. The natural environment is quite alike: the physical environment of the Republic of Karelia is in many ways similar to that of eastern Finland and Fennoscandia. Eastern Finland and the Republic of Karelia have abundant surface and ground waters. Lakes and rivers cover 23 percent of the Republic of Karelia and 18 percent of Finnish North Karelia.

The history of nature and land use is different, however, as can be seen in the environment and state of the environment. First, in North Karelia in Finland only groundwater is used for water supply purposes while in the Republic of Karelia 96 percent of drinking water is taken from surface waters. Second, the main pollution load in eastern Finland is from diffuse load while in the Republic of Karelia point sources are dominant, especially in population centres. Consequently, the environmental health situation differs and waterborne epidemics are more frequent in the Republic of Karelia than in eastern Finland. However, as pollution does not stop at the border, the environmental situation in a border area is a concern for neighbouring countries. Moreover, water basins do not recognize or follow borders. For example, 19.9 percent of the Lake Ladoga catchment area is situated in Finland.

Research and monitoring co-operation

Lake research co-operation dates back to the late 1970s and early 1980s when vendace fish species were studied in Lake Pyhäjärvi, a cross-border lake between Finland and the Republic of Karelia. Co-operation continued after the collapse of the Soviet Union with research on Lake Ladoga, the biggest lake in Europe with a surface area of 17 891 km^2, a volume of 837 km^3, a mean depth of 47 metres and maximum depth of 230 metres.

The water exchange rate of Lake Ladoga is 11 years, which makes the limnic process rather conservative.

The ecological condition of Lake Ladoga concerns several million people, including the six million inhabitants of St. Petersburg. The main problems of Lake Ladoga are eutrophication and contamination. As Lake Ladoga and its basin are large, covering several administrative regions and areas, and it has a unique nature and also attracts a multitude of interests, there are and will be conflicts related to the area, the lake and its natural resources. Therefore the precautionary principle, a participatory approach and basin management principles are important in the management of the lake. Nowadays, research co-operation includes not only lakes and rivers but also forest fragmentation and land use studies. Research is usually connected to the environmental and water related impacts of forestry and forest management practices.

Development of monitoring and monitoring methods is important for all institutions taking part in this co-operation. A common understanding on methods used and an inter-calibration of those methods makes the exchange and comparison of research and monitoring results possible. As the new EU Water Framework Directive[4] promotes information exchange and co-operation in the management of catchment areas covering non-EU countries, common monitoring methods will be needed in the future. Therefore, joint research on cross-border lakes such as Lake Pyhäjärvi, for example, is important at the moment.

Information exchange and environmental awareness

Environmental information exchange started with the publication of the joint Ecological Bulletin, aimed at the general public. The first bulletin, issued in 1992, compiled for the first time basic information about the state of waters and air quality in eastern Finland and the Republic of Karelia. The bulletin gives a comprehensive view about the problems and activities concerning water protection and air quality improvements. The second bulletin in 1997 dealt with nature protection, nature reserves, natural parks and biosphere reserve activities.

Environmental awareness-raising and environmental information exchange between regions is one of the key areas of co-operation. Practical projects concerning environmental information exchange across the border have been carried out. One such initiative is Kaarna, a mobile environmental education and information dissemination unit supplied with special environmental awareness material for different audiences. The Kaarna initiative has concentrated on environmental work in the Republic of Karelia

[4] Council Directive 2000/60/EC of 23 October 2000 establishing a framework for the Community action in the field of water policy, OJ 2000 No. L327, 22 December 2000.

around the following themes: hazardous wastes, waste composting, restoration and protection of wells and savings in water use. The aim has been to motivate people to think and discuss water issues. Kaarna has visited schools as these, and the education system in general, provide the widest existing channels for disseminating information and knowledge about such issues. Through children, information is passed onto their parents, friends and relatives. Furthermore, a positive attitude to water protection and conservation developed at an early age is often carried into adulthood. It is important to establish a mobile environmental unit like Kaarna for the Republic of Karelia for water and environmental awareness-raising purposes. The organization responsible for this future work should be clarified and agreed.

Development of municipal water services and waste water treatment

Other aims of cross-border co-operation between Finnish Regional Environment Centres and the Republic of Karelia have been the promotion of the use of ground water as a supply of drinking water and the development of waste water facilities in the Republic of Karelia. The North Karelia Regional Environment Centre and the North Savo Regional Environment Centre have actively supported ground water investigations in the Republic of Karelia and in developing technology for the provision of drinking water for Karelian citizens from ground water sources. The improvement of water services is important for human health and welfare and also for the development of agriculture and the food industry.

The first investment project started in 1993 with the construction of the Lahdenpohja waste water treatment plant. Now, the work includes ensuring the co-ordinated operation of the waste water treatment plant together with the City of Joensuu Waterworks. The experiences gained in Lahdenpohja have influenced other local authorities in the Republic of Karelia to plan new investment projects which, with the exception of Sortavala, have not been realized due to lack of financing. The City of Joensuu, the City of Joensuu Waterworks, the the City of Sortavala authorities and the Sortavala water utility, together with the North Karelia Regional Environment Centre and the Ministry of the Environment of Finland have been active in planning investment projects and financial proposals and agreements. The activities have been fruitful as a new water supply facility in Helylä and a new waste water treatment plant in Sortavala have been built with the help of EU Tacis funding. At the moment, water and waste water networks are being inventoried and plans for improvement activities are under way.

The joint projects and investigations have shown that the obstacles to water service development are of an economic and institutional nature and do not result from technological deficiencies. Due to insufficient funding of maintenance works, inefficient operations and excessively high water and energy consumption, the need of renewing and repairing existing systems is immense. To target the improvement activities effi-

ciently, more data is needed on the current situation relating to the environmental infrastructure, for example.

A pilot project to improve the operation and management of municipal water services was started in the Pryazhinsky District together with the City of Kitee. The goal of the project was to develop an institutional base and the management and finances of municipal water services in sparsely populated regions with large rural areas. This would facilitate future investment and renovation work to be effectively implemented after the project. The project included an assessment of the situation, capacity-building in water analysis, a technical development plan, a finance and management development plan, and raising public awareness of municipal services and of techniques to reduce water consumption. The work with customers and awareness-raising was included in the project as institutional development starts with customer-friendly service, based on demand, that consumers are willing and able to pay for. Often services are taken for granted and their value is understood only once they stop functioning. Moreover, customers should be aware of their habits and the consequences of non-payments, delayed payments and excess water and energy use. They should know how to conserve water and how to maintain in-house pipes and equipment. During the project, water services were reorganized in Pryazhinksy District. The financial situation of the water utility improved, facilitating future investment in improvements suggested in the water service development plan created during the project.

Partners and actors in water co-operation at the local and regional level

Research organisations such as Joensuu University and the Russian Academy of Science's Karelian Research Centre and its institutes, especially the Northern Water Problems Institute and the Institute of Biology, have been active in water research co-operation. This is natural, due to the win-win situation of such co-operation. The co-operation makes new financial resources possible to both parties and specialists can learn from each other. For example, integrated research and monitoring development has been important to both countries.

The regional environmental authorities – the Finnish Regional Environmental Centres situated in border areas, the Agency for Natural Resources and Environmental Protection of the MNR of Russia, and the Republic of Karelia Regional Energetics Committee – are key partners in co-operation. The North Karelia Regional Environment Centre and the North Savo Regional Environment Centre have been active in water supply development and investment planning. Especially long term co-operation on ground water use and investigation of ground water resources has been vital.

Twin municipality activities between eastern Finland and the Republic of Karelia have long traditions. Most municipalities in eastern Finland have a twin municipality agree-

ment with districts of the Republic of Karelia. Municipalities situated in the proximity of the border have been particularly active. In the early years, twin municipality activities were based on cultural activities, but now also social development activities and environmental co-operation take place between municipalities. Water supply and waste water utilities co-operation, for example, between the City of Joensuu Waterworks and water utilities in Sortavala and Lahdenpohja in the Republic of Karelia, has been important for renewing infrastructure and improving maintenance of water supply and waste water treatment plants. The Water Co-operative of Kitee has given input and experience in the restructuring of water services in Pryazhinksy District.

Surprisingly perhaps, non-governmental organisations (NGOs) have been passive in water co-operation issues between eastern Finland and the Republic of Karelia. One reason for this might be the relatively small amount of cross-border lakes and rivers affecting the state of waters on the other side of the border. Another reason may be that having concentrated on forest sector activities, especially on the ecological and economic impacts of wood-harvesting and trade, NGOs might not have the resources to work with cross-border co-operation in the water sector. Only recently have NGOs emerged in regional water co-operation, through labour and trade union associations, voluntary associations of water sector experts and professionals, and local Finnish-Russian associations.

Lessons learned

Usually the lack of financing is an obstacle cross-border co-operation at the local and regional level, especially in peripheral regions with low economic or social capacity for co-operation. Since Finland joined the EU, EU financing through Interreg and Tacis programmes have been used to finance environmental co-operation. The actors and main partners in water sector co-operation have together learned to apply and use these financial instruments for joint benefit and for the benefit of the environment. The participative and co-operative models for the planning of projects and financial applications have improved the implementation and final results of the projects.

With cross-border co-operation, language difficulties are the most referred to and encountered problems, but these are also the easiest to overcome. Partners need only to allocate resources to translation and interpretation or employ staff with the necessary language skills. Normally, language is not a problem in cross-border co-operation as far as only Finnish or Russian is needed. However, the more languages are needed, the more difficult it is to find a specialized workforce or interpreters, and the bigger the share of financing allocated to administration and translation services. Even though language is a minor problem, it should be noted that a common language and joint definitions of key terminology and actions are needed. As language only represents a part of cultural differences, a deeper understanding of terms and meanings can be gained by understanding cultural, organisational and institutional differences and inherited ways of negotiating, discussing, acting and working. This mutual understanding can be gained only through long-term co-operation. A sustainable and strong partnership is

based on personal contacts and long-term commitments to co-operation. Even though most of the cross-border co-operation on the local and regional level is at the moment project-based, long term co-operation strategies and structures for co-operation are essential to reinforce the environmental improvements achieved thus far.

At the moment there is no joint forum where regional environmental co-operation targets or activities could be discussed, prioritized and agreed. Building up this kind of a forum would increase networking opportunities and the transfer of experiences between organisations. It would also improve the efficiency and effectiveness of environmental co-operation as it would help to prioritize action and work at the local and regional level, decrease overlapping of activities and encourage a multi-stakeholder approach to joint environmental problems.

Investments and technology transfer are needed to improve deteriorated facilities and networks. In the beginning of cross-border co-operation, water supply and waste water treatment projects were technology and engineering oriented. Technology transfer and investment projects have only recently aimed at the development of viable water utilities, fostering not only technological upgrading of water supply and waste water treatment plants and networks, but also institutional development and capacity-building. Focus on institutional development and capacity-building instead of engineering and technological solutions would help in reaching sustainable results in a long run. Only when there is increased accountability for results and the required human and economic capacity to operate, maintain and develop new technologies, will technological co-operation reach sustainable results. Cross-border co-operation fosters environmental innovations and their diffusion. Innovations are not only connected to new technologies but also to organizational and management improvements. A hard economic environment in particular influences the need to find low-cost solutions. Networking between different actors and sectors also fosters innovation in research and development activities.

Fundamentally, it could be said that the most important result of these cross-border projects is co-operative learning: learning to work with experts from a different cultural, organisational or professional background. At its best, cross-border projects foster co-operation across the border, between institutions and between sector experts, resulting in a more holistic approach to environmental problems and projects. Still, there is much to be done to enhance cross-sector co-operation and to include economic, health, social and educational issues into water sector co-operation. Cross-border co-operation relies on the high level of enthusiasm of key persons to work together, build up partnerships and attain incremental improvements in the long run. During cross-border projects it is evitable that problems and obstacles concerning financing, local customs and bureaucracy will be encountered, but if partners are highly committed to co-operation, they can be solved together.

Regional and local level environmental co-operation complement government level co-operation. A bottom-up approach to joint environmental problems can be effective and

cost-efficient and result in sustainable improvements. It increases citizen-awareness and inspires local authorities to act and take responsibility over their own environment. In the end, the state of the environment is a matter for people living in the area and not only for governments, authorities or research organisations.

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