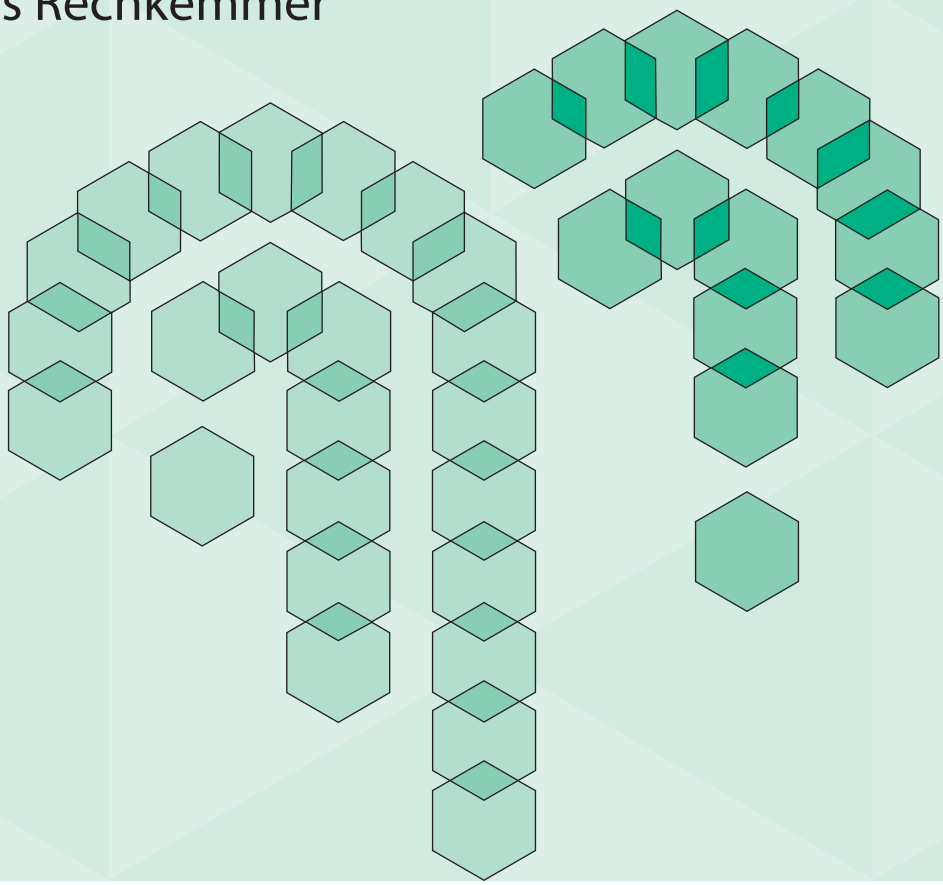
UNITED NATIONS
UNIVERSITY
UNU-EHS
Institute for Environment
and Human Security

International Environmental Governance

Issues, Achievements and Perspectives

Andreas Rechkemmer



SOURCE

'**S**tudies **O**f the **U**niversity: **R**esearch, **C**ounsel,
Education' - Publication Series of UNU-EHS

No. 3/2006

UNU Institute for Environment and Human Security (UNU-EHS)
D-53113 Bonn, Germany

Cover design by Gerd Zschäbitz
Copy editor: Ilona Roberts
Printed at Paffenholz, Bornheim, Germany

ISBN: 3-9810582-2-4 (printed version)
ISBN: 3-9810582-3-2 (electronic version)
ISSN: 1816-1154

SOURCE

**'Studies of the University:
Research, Counsel, Education'**

Publication Series of UNU-EHS

No. 3/2006

International Environmental Governance – Issues, Achievements and Perspectives

Andreas Rechkemmer

Acknowledgements

The author wishes to express his sincere thanks to Falk Schmidt and Nils Harder, both Free University of Berlin, for their most valuable research contribution, Prof. Janos J. Bogardi, Director of UNU-EHS for his counsel and advice, and Ilona Roberts and Carlota Schneider, UNU-EHS, for their support while editing the final manuscript.

Bonn, June 2006

Foreword

Environmental awareness and the political will to rehabilitate and to protect ecosystems, have certainly been growing since their inception 1970. This development can be followed in a series of large, intergovernmental conferences. Programmes, conventions, their governing organs and secretariats together with national ministries and environmental agencies can be identified as the most important instruments of environmental governance.

As ecosystems stretch over national borders and environmental impacts speed with complete disregard of national jurisdictions and responsibilities the need for consensus-based global environmental governance becomes more than obvious. There might be an agreement that our present international environmental governance should be improved, but there is certainly no consensus yet on how to proceed and what scheme, structures and instruments would be "optimal" to be created.

Hence at this juncture it is worth to review the existing environmental governance to analyse its shortcomings and to outline possible approaches towards more coherent and efficient models.

Environmental issues are and should even be more the common concern of the member states of UN. Without adequate environmental conditions the achievements of social and economic developments would ultimately be undermined. The very pre-condition of sustainable development is to secure our environment sustainably. Environment is not only human related, but dynamic both in its natural processes and in its interactions with human society. Environmental issues are also human security issues as have been advocated by several publications of UNU-EHS and emphasized by the author who draws the triangle linking human development and human security to global environmental change.

We are convinced that the ability of mankind to secure its own future could be measured through its willingness, discipline and success to establish and implement its environmental governance.

In this publication, Dr. Rechkemmer outlines how global governance and UN reform endeavours hold both challenges and opportunities for improving the environment and enhancing human security. The author urges us to emphasize the strong links between these two dimensions in the ongoing institutional reform process. He argues that a holistic consideration of the security relevant aspects of environmental problems would not only help to mainstream the environmental concerns into the international political agenda and strengthen the corresponding institutions, but also enhance human security for all.

This issue No. 3/2006 of the UNU-EHS SOURCE series aims to serve as a comprehensive background summary of the state-of-the-art, to discuss how environmental governance is embedded into our global governance scheme and to show how trends develop and paradigms evolve. Its target audience are first and foremost students, professionals, scholars, but also the interested public whom this publication should serve as the entry point to the complex subject of international environmental governance.

With its summary of the most important multilateral agreements this publication can serve also as a quick reference book. Beyond its above outlined units and objectives this publication enables the English language reader to obtain a good insight into the rich German language literature of the subject.

Janos J. Bogardi
Director UNU-EHS

About the Author

Andreas Rechkemmer holds a M.A. in Political Science and a Ph.D. in International Relations. He is a Senior Academic Advisor to the Director of UNU-EHS. Since November 2005 he serves as the Executive Director of the *International Human Dimensions Programme on Global Environmental Change* (IHDP). He is a guest researcher at the *Social Science Center Berlin* (WZB) and teaches at Free University of Berlin. His current research focus is on the link between Global Environmental Governance, Human Security and UN Reform. He served the United Nations as a Programme Officer in the field of Sustainable Development for several years, with a regional focus on Africa, and worked with *Stiftung Wissenschaft und Politik* (SWP) – German Institute for International and Security Affairs, the largest foreign affairs think-tank in Western Europe. His professional activities also comprised consultancy and policy advice to various national ministries and international organisations. Andreas Rechkemmer is author and editor of several books and over 30 scientific articles.

Table of Contents

1. Introduction

This publication, in the tradition of comprehensive academic readers providing state-of-the-art knowledge, aims to feature an overview on the fascinating policy field of *International Environmental Governance* (IEG). In the end it shows that, for the sake of a more effective system of international cooperation in that field, intelligible institutional reform can and should foresee inclusion of some of the most prominent elements of the global governance paradigm, i.e. cross sectoral and multi-stakeholder based policy instruments. The study's empirical focus lies, on one side, on the actual political efforts to reform the institutional architecture of global environmental governance, in close connection with four recently released major UN reform reports. On the other side, it provides substantial insights into the emerging process of environmental regime building at international level, and focuses on the results yielded at major world summits such as Stockholm 1972, Rio 1992, Johannesburg 2002, and New York 2005. All these processes feature a mixed portfolio of structural as well as policy-oriented reform approaches. This issue of SOURCE flags out various challenges and opportunities that the above described processes of policy development, regime building and conference outputs create for the practical area of Environmental Politics. The publication is based on scientific literature as well as the analysis of the outcomes of related political initiatives. Its general notion is rather academic with a bias to policy relevance. In the view of the author, it is high time to bring together practitioners and scientists to present forward-looking recommendations for the political process ahead.

This issue will start with an analysis of the state of international environmental governance within the present overall political setting. It will then shed light on the main environmental problems dealt with at our time, and the negotiations and deliberations undertaken to tackle them at global level. In a next step, various reform options and approaches are synthesized to eventually come some conclusions thereafter.

2. Environmental Governance in a Changing International Setting

2.1 The Genesis of International Environmental Governance

Indeed, much has been said and written on globalisation, global governance and, more specifically, on global or international environmental governance within the past decade. Significantly enough, the terms *globalisation* and *global governance* are relatively new: statistics of relevant texts show that their use in literature, science and rhethorics has basically started to become somewhat trendy only in the early Nineties (for a detailed statistical examination see Altvater and Mahnkopf, 1999: 20).While it is not the objective here to write about the effects of globalisation, it is evident that there are close links between this phenomenon and others commonly referred to as global environmental problems. The *International Monetary Fund* (IMF) defines globalisation as follows:

> Economic 'globalization' is a historical process, the result of human innovation and technological progress. It refers to the increasing integration of economies around the world, particularly through trade and financial flows. The term sometimes also refers to the movement of people (labour) and knowledge (technology) across international borders. There are also broader cultural, political and environmental dimensions of globalization. (IMF, 2000)

Markets promote efficiency through competition and the division of labour – the specialization that allows people and economies to focus on what they do best. Global markets offer greater opportunity for people to tap into more and larger markets around the world. It means that they can have access to more capital flows, technology, cheaper imports, and larger export markets. But markets do not necessarily ensure that the benefits of increased efficiency are shared by all. Thus the issue of globalisation cannot be simplified as a phenomenon of 'free trade' agreements, or the policies of the World Bank. It needs to be understood more systemically, as being a global process. A thorough reorganisation of the world's economic and political activity is underway and governance patterns of transnational corporations and international trade bureaucracies will certainly play an even more important role in the future.

Global environmental issues did not really play a significant role on the international political stage – as far as the UN and other formal negotiation settings are concerned – until the early 1970s. The consciousness of the necessity for a sustainable use of the planet's natural resources was basically, if at all, limited to national initiatives. At the time of the United Nations' inauguration in 1945, environmental issues did not matter – there is no reference made within the provisions of the UN Charter (Rechkemmer 2003: 74). The Organisation first focused on the issues of peace and security, international cooperation and human rights. In the same context, the *Worldwatch Institute* states:

> When the United Nations was created a half-century ago, such events would have been difficult to imagine. Environmental degradation was not even considered much of a national threat at that time, let alone a pressing global problem that could provoke international conflict and undermine human health, economic well-being, and social stability. Accordingly, the U.N. Charter does not even mention the word 'environment'. In 1945, as large parts of Europe and Asia lay in ruins, ensuring that no world war would ever again break out was viewed as the most urgent task before the world community." (Worldwatch Institute, 1995: 2)

However, as a result of the emerging process of de-colonialization and thus of the growing number of UN member states, especially in the 1960s, new issues like development as well as

economic and social affairs made it on the international agenda. Finally, also environment was recognized generally as a global issue to be dealt with by the international community and in particular by the United Nations and its specialized agencies. It was in 1968 that the United Nations General Assembly first recognized the need to engage into international environmental issues. Resolution GA 23/198 states that greater attention should be given to human environment as a basis for sustainable economic and social development. Furthermore, the General Assembly expressed the hope that donors would assist developing countries through the means of enhanced cooperation to find appropriate solutions for their environmental problems. It was the first time that a link had been established between environment and development. The same resolution called for the organization of the *United Nations Conference on the Human Environment* (UNCHE), the first world conference on environment.

In 1972, the UN organized this conference in Stockholm. Its opening day, 5 June, is still celebrated globally as world environment day. Imke Keil (1994) calls UNCHE a first pragmatic step towards environmental politics. Although the 113 participating countries insisted on their national prerogatives throughout the conference and seemed unlikely to sacrifice those to some extent so as to ensure a common denominator as a platform for substantial improvements, two remarkable results came out of UNCHE: the main concluding document, the *Declaration of the United Nations Conference on the Human Environment* (Stockholm Declaration), which basically consists of a thorough listing of environmental problems of global concern known at the time, and, preliminary to the decisions to be made by GA resolutions 27/2997 and 27/3004 on 15 December 1972, the call for the foundation of the *United Nations Environment Programme* (UNEP), headquartered in Nairobi, Kenya (for a comprehensive review see Hünemörder, 2005).

UNCHE was a bold step forward, in the sense that for the first time ever, global players and stakeholders could refer to an international document addressing the full range of known environmental issues of global concern. Also, the declaration addressed all the pertaining issues highlighted in resolution GA 23/198, notably the linkage created between environment and development. Furthermore, other important issues such as international liability and the polluter pays principle, the decision to raise the official development assistance (ODA) of OECD countries to 0.7percent of their GNP, and the foundation of Earthwatch, a global satellite-based monitoring system, were addressed and established first through the Stockholm Declaration. However, since there was neither a legally binding status attached to this document nor a clear mechanism for arbitration and enforcement created, the Declaration did not have sufficient power, and just reflected a Westphalian symptom: states were ready to address global issues globally, but rather dwelled on their national authority in handling environmental affairs (Keil, 1994: 82).

The second important multilateral achievement concerning global environment was the foundation of UNEP, whose onset functions consisted mainly in the collection, systematization and dissemination of state-of-the art knowledge, the coordination of national and inter-agency efforts, mainstreaming the most pertaining problems of global environment into existing intergovernmental processes and conferences, and the facilitation of conferences, meetings and workshops. However, UNEP – obviously exceeding the tied nature of its original mandate – soon started to play a more pro-active role in providing leadership and catalytical support to the invocation of new conventions and regimes such as the Washington *Convention on International Trade in Endangered Species of Wild Fauna and Flora* (CITES), to which the main contribution came from IUCN, and the MARPOL convention restricting intentional discharges by ships (both 1973), the Vienna Convention (1985) respective the Montreal Protocol on Substances that Deplete the Ozone Layer (1987), and the Basel Convention on controlling transboundary movement of hazardous wastes (1989). UNEP also sponsored the *Intergovernmental Panel on Cli-*

mate Change (IPCC) in October 1990 jointly with WMO.[1] But like UNCHE, apart from the proactive promotion measures sketched out above, the initial organizational matrix of UNEP can be considered as rather weak: no enforcement, no controlling, no initiative for international legally binding arrangements. Its budget comes from the regular UN core budget, fund raising for programming and project design and administration is, as a rule, depending on voluntary contibutions by member states, trust funds and even by non-governmental entities – a 'humiliating' perspective. Despite all this, UNEP in its history has proved to be creative: apart from Earthwatch, the GRID/GPS satellite imaging project has been set up, input to a multitude of international, regional and national conferences has been provided, UN-HABITAT, and a series of international treaties have been promoted and inaugurated by UNEP (UNU/IAS, 2002).

Since resolution GA 23/198 and 1972's UNCHE, global environmental issues had thus been tackled multilaterally at first, but much according to the principle of non-binding resolutions and political committments, apart from some of the aforementioned particular regimes, and without challenging the tradtional sovereignty concept of the states involved. Ultimately, the breakthrough for global environmental governance came in the Eighties.[2] Following an initiative by UNEP, the United Nations General Assembly in 1984 established the *World Commission on Environment and Development* (WCED), the so-called *Brundtland Commission*[3]. Its members were independent experts who were supposed to come up with substantive proposals for enhanced exploration of the nexus environment-development. The commision's final report *Our Common Future*, or *Brundtland-Report (WCED, 1987)*, became the locus classicus for the term *sustainable development*, its definition became a paradigm:

> Humanity has the ability to make development sustainable – to ensure that it meets the needs of the present without compromising the ability of future generations to meet their own needs. *(WCED, 1987: 8)*

The Brundtland Report further defines sustainable development as "...a process of change in which exploitation of resources, the direction of investment, the orientation of technological development, and institutional change are made consistent with future as well as present needs" (WCED, 1987: 9). For Udo E. Simonis, sustainable development thus deals with "two fundamental issues, i.e. inter-generational equity and comprehensive structural adjustment" (Simonis, 1998: 1). It has to be recalled that the term sustainable development was promoted and functionalized by the *Brundtland Commission*, yet not invented. It was first introduced in 1980 as part of the *World Conservation Strategy* published jointly by The *World Conservation Union* (IUCN), the *World Wildlife Fund* (WWF) and UNEP[4]. The core concept foresees that economic growth is on the long run not possible without maintaing functional ecosystems, and that revenue generation by simple exploitation of natural resources is possible only for a short while.

The Brundtland report became influential by creating a strong link between the policy fields, or sectors, of environment and development, highlighting that poverty, under-development and depletion of natural resources are closely linked and mutually interactive. The concept of sustainable development became the new paradigm for global environmental governance. The publication and dissemination of the Brundtland Report coincided with the ongoing erosion

---

1 Thorough evaluations of regimes are contained in Young, 1997. See also Gehring, Oberthür, 1997, and the seminal volume on regime theory: Krasner, 1983.

2 The notion of *global environmental governance* is distinct from the one of *global environmental politics*, which is an adequate description for the multilateral efforts of the period before 1987. *Global environmental governance* implies the concept of global governance.

3 This name followed the commission's chairwoman, the former Prime Minister of Norway, Mrs Gro Harlem Brundtland.

4 See IUCN, UNEP, WWF, 1991. On the evolution of the concept of sustainable developemt see also Pallemaerts, 2003.

process in the former socialist countries and the end of the Cold War. It thus benefited in its outlook from a newly created historical momentum, in which states, all over sudden, were ready and eager to revive the principle of collective action and yield the establishment of multilateral agreements under the aegis of the United Nations. It was the time of an important series of world conferences, invoking new forms of international agreements, in which genuine collective goals were identified and supposed to be tackled. Nation-states showed readiness to sacrifice national interests and traditional sovereignty considerations to a large extent for the desired benefit of global concerns. This phase reached its climax in the early Nineties and was reflected in a number of 'historical' addresses invoking a *new world order*.[5] Being a so-called soft policy area, global environmental issues benefited from this momentum, given that heads of states and governments obviously perceived it as one of the preferred testing grounds for the newly identified approach. Thus, the spirit of "postmodernity", i.e. a post-westphalian order, was given a generous platform to infiltrate international relations.

In this context, and in concordance with the suggestions of the Brundtland Report, the General Assembly passed resolution 44/228 on 22 December 1989, following the preliminary UNEP Governing Council resolution 15/3 of 25 May 1989, which decided on the organisation of the *United Nations Conference on Environment and Development* (UNCED), to be held from 3 to 14 June 1992 in Rio de Janeiro, Brazil. The foreseen mandate for UNCED was originally to review and to take stock of the development made on the respective sectors of environment and development since the Stockholm Conference of 1972, and to identify new strategies for enhanced collective action at both global and regional levels. It was foreseen to further merge the two sectors into the field of sustainable development. UNCED is regarded as incomparable and the most important event to date in global environmental politics. The conference represented a watershed due to comprehensive calls for linking environmental and development issues as stated above. Expectations of the representatives from the 180 participating countries ran high, and the concept of sustainable development, which had become a sort of slogan, introduced a new quality in international cooperation. A number of key multilateral resolutions and agreements were agreed on at UNCED, above all »*Agenda 21*«. Expectations were even higher for the next decade regarding prevention of environmental catastrophes, a just organisation of global markets and the fight against poverty and famine. The Nineties were supposed to bring about a worldwide change in awareness.

2.2 What Defines International Environmental Governance?

While the term *global environmental politics* refers to a specialized thematic target field as a sub-category of international politics and implies states as principal actors yielding intergovernmental agreements, one could raise the question: What defines *global environmental governance*? Enlightening for the understanding of the concept in question, Maria Ivanova contributed the following elaborations to the discourse:

> Two traditional forms of governance have dominated world affairs until recently – national governance through governmental regulation and international governance through collective action facilitated by international organizations and international regimes. However, governing human relations has become a complicated endeavor that has transcended the national and interstate scale and moved to a global level involving multiple actors across national borders and multiple levels of regulatory authority – from subnational to supranational. In this context, institutional arrangements for cooperation are

5 This term is usually identified with President George Bush sen.'s speech to the U.S. Congress, 6 March 1991. This speech has often been cited as the administration's principal policy statement on the postwar order in the Middle East.

> beginning to take shape more systematically and have now been recognized as critical to the effective tackling of any global problem. Public-private partnerships, multi-stakeholder processes, global public policy networks, and issue networks are regarded as important tools for global governance. (Ivanova, 2003: 9)
>
> [...]
>
> International organizations are the traditional facilitators of collective action at the international and global level and provide a particularly interesting analytical lens for partnership arrangements. International organizations may perform a range of roles in a partnership context – enabler, facilitator, supporter, or active participant – and influence the shape, form, and function of the collaborative arrangements. (Ivanova, 2003: 10)

UNCED became the first "playground" on which these concepts were brought in and tested, and subsequently reflected in UNCED's conference outcomes as well as in the entire Rio follow-up process. Charlotte Streck highlights another feature of global environmental governance – its networking character. She provides her own vision in the article *Umweltpolitik in globalen Netzen* (Streck 2001: 3). The author states that such networks are poorly formalized structures. Their tasks are the identification of certain problems that require collective regulation, global agenda setting, the implementation of taken decisions, the generation and collecton of knowledge, the discussion and setting of standards, and creative negotiation processes. (Streck, 2001: 3) In the following this definitory phrase is used to characterize what is commonly meant nowadays by global environmental governance, as a first systematic approach, and on a rather phenomenological basis. Yet one addition seems necessary: the role of international organisations, particularly the organs, programmes and agencies of the UN system, and also the system of world conferences, should not be underestimated in their significance as platforms as well as mediators.

Multilateral cooperation experiences a redefinition of its genuine connotation: through the incorporation of non-state actors, the scientific community and non-hierarchical regulatory patterns of networks international cooperation becomes more and more multilateral in the real sense of the word. However, we should not neglect that formal and inter-state negotiation processes, under UN aegis and yielding classical legal agreements or single regimes, are still part and parcel of global environmental governance structures, as are the states as important, if not principal, actors among many others. Hans-Joachim Schellnhuber and Frank Biermann (2000: 10-11) add that the regulation of global environmental problems cannot be based on decentral mechanics of the market alone, they require effective and efficient international institutions and global legislation.

An analogous structure to a globalized world would consist of a global federative constitutive-executive zone, i.e. a world government, which is out of sight.[6] Therefore, Schellnhuber and Biermann promote the formula "*global governance instead of global government"* for the environmental field. Other scholars highlight the role of NGOs and the need for a more formalized participatory legitimicy for the same. In their article *The Role of NGOs and Civil Society in Global Environmental Governance*, Barbara Gemmill and Bimbola Bamidele-Izu state:

> International decision-making processes seek legitimacy through the involvement of civil society, yet formal mechanisms for NGO participation within the UN system remain limited. Ad-hoc civil society participation should be replaced by a strengthened, more formalized institutional structure for engagement." (Gemmill and Bamidele-Izu, 2002: 1)

6 On the concept of a world government see Albrecht, 1998. Compare it with the views provided in Rosenau and Czempiel, 1992.

The authors identify five major roles that civil society can play, i.e. collecting, disseminating, and analyzing information, providing input to agenda-setting and policy development processes, performing operational functions, assessing environmental conditions and monitoring compliance with environmental agreements (the famous "watchdog" function), and advocating environmental justice. The German *Institute for International and European Environmental Policy* (Ecologic) summarizes, on the same account, the roles that NGOs play in the context of global environmental governance, according to their analysis:

- Enhancing the knowledge base;
- Advocacy and lobbying;
- Membership in national delegations;
- Contribution to compliance review and enforcement as well as dispute settlement procedures;
- Ensuring transparency;
- Supporting international secretariats;
- Networking, including integrating levels of governance; and
- ‚Globalization' of values and preferences. (Ecologic, 2002: 4)[7]

Rounding up the definitory framework provided for the term in question, Richard Stewart should be mentioned, who writes:

> The coming decades pose an enormous challenge of governance for the global community: preserving the planet's ecosystems and protecting the world's common environment while meeting the aspirations of all peoples for higher personal and societal levels of economic welfare. Meeting this challenge will require newly developed and developing countries and public/private international partnerships for sustainable development; wider adoption of economic instruments for environmental and resource protection; improved international mechanisms for risk assessment and resolution of trade/environment controversies; and more focused and effective international environ-mental laws and institutions... (Stewart 1999: 15)

All aforementioned aspects and elaboratory contributions may serve as a conceptual quilt to grasp the notion of global environmental governance, always keeping in mind that this field provides a good example of the notions of global governance.[8]

2.3 Variables and Parameters of Changing International Relations

As early as in 2000, when the first *Global Ministerial Environment Forum* (GMEF) was held in Malmö, Sweden, many governments put emphasis on the necessity to both strengthen and enlarge the international structures of environmental governance, which ought to be further developed for achieving more effective results. Since then, an impressive number of reform proposals have been submitted to the global audience, for instance, the creation of a so-called Earth Council, a body of moral credibility, comprising internationally renowned eminent personalities, and in conformity with the Brundtland Commission, or the introduction of environmental taxation for the use of global public goods such as air, sea or outer space, including increased burden sharing responsabilities for the private sector. Another suggestion, that has constantly been reiterated by the German, French and other governments, is the empowerment

7 Other articles are Buschor, 1996; Willetts, 1996; and Princen, Finger, 1994.

8 A recommended article on the tensions between global environmental governance and the globalization of economic structures, featuring the case of climate politics, is Flavin, 2002. See also Knoepfel, 1994 and Wapner, 1995.

of UNEP, supposed to be transformed into a specialized agency or even a world environmental organisation.[9]

Focusing on the UN system, global environmental governance has meanwhile become a widely-stretched, dense and diversified institutional framework consisting of a multitude of agencies, structures and bodies – not mentioning the less formalized ongoing negotiation processes and conference series. The main organs of the United Nations, the General Assembly, the *Economic and Social Council* (ECOSOC) as well as the *Commission on Sustainable Development* (CSD) are dealing with environmental issues, just like the *Department of Economic and Social Affair*s (DESA) of the UN Secretariat. Moreover, UNEP, UNDP, the Regional Commissions, and a number of funds, programmes and specialized agencies such as IFAD, FAO, Unicef, UNESCO, the WMO and others, work on the same line. Finally, the convention secretariats such as UNFCCC, UNCBD and UNCCD, the UN Forum on Forests and other administrative bodies entrusted with managing international regimes of environmental concern should be mentioned. Last but not least, the World Bank has, of course, constantly enlarged its environmental efforts.[10]

This orderly disorder of agencies, bodies and regimes working in the field of environment respective sustainable development, will require particular attention in the forthcoming years. Thirteen years after Rio and three years after Johannesburg, the institutional picture of global environmental governance reveals a number of organisational pathologies, i.e. an ineffective and certainly also inefficient multiplication of efforts due to a multitude of actors and agents involved. Besides the above mentioned approach, to upgrade UNEP towards a specialized organisation, a number of other proposals for reform have been submitted, amongst which are the so-called mainstreaming approach – *greening the IMF/World Bank and the WTO* – or the foundation of a completely new world organisation for sustainable development, which would render UNEP and UNDP, but maybe even the existing conventions and regimes, obsolete.[11]

But is this the hour of bold multilateral approaches, even for their reform? In their article *Weltpolitik zwischen Staatenanarchie und Global Governance*, Dirk Messner, Jeanette Schade and Christoph Weller (2003) claim that in the aftermath of 11 September 2001, security issues have once more dominated the global agenda, bringing forth a restoration of power politics based on national interests, particularly promoted and followed by the United States, and even including a doctrine of preemptive military strikes. According to the authors, this tendency not only challenges international law, but also deeply undermines all efforts undertaken and already established towards the principles of collective action and global governance.

The authors state:

> After World War II, the U.S. triggered the process of institutionalization of global politics and catalyzed multilateral cooperation. They succeeded in the formation of a global system of interdependent collective action through balance of interests. This system, which naturally served U.S. aspirations, however stabilized international relations and united a multitude of states within an international order having the United Nations as its gravity center. Meanwhile, America has withdrawn from this approach. (Messner et al., 2003: 236, translation by Andreas Rechkemmer)

This movement of consequent, if not systematic, withdrawal from multilateral cooperation, comprises strategic policy fields such as arms control regimes – named be the so-called diversification of nuclear arsenals to tackle the problem of international terrorism, the cancellation of

9 In chapter 6 one can find an in-depth discussion on institutional reform proposals and perspectives.

10 On the UN and its organs and agencies' role within networks of global governance, see Reinicke and Deng, 2000.

11 More on this subject can be found in Conca, 1996; Rechkemmer, 2005b; and Bauer and Biermann, 2005.

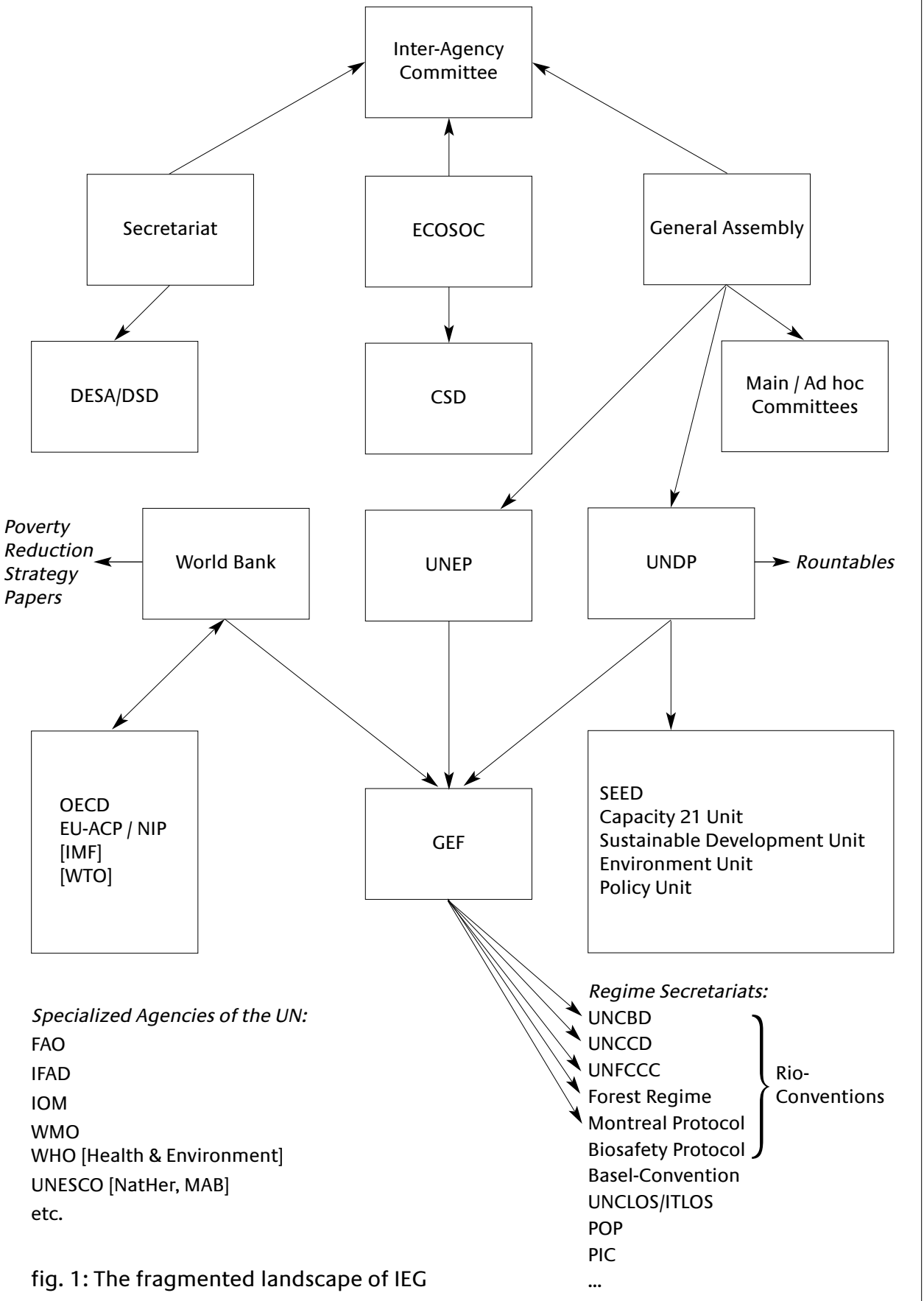


fig. 1: The fragmented landscape of IEG

the bilateral US-Russian 'ABM' treaty, the treaty on nuclear test stop, and the verification regime for biological weapons –, the Kyoto protocol, the International Criminal Court and bilateral trade treaties to bypass and undermine the regulatory provisions of the WTO. Messner, Schade and Weller recall Jochen Hippler's term "selective multilateralism", sometimes also called "multilateralism à la carte", which could serve as an adequate description of the US' and other important states' policy towards global issues (*Messner et al., 2003:* 237).

What about the theories of institutionalism and regime building? What about the strong empirical tendency towards global treaties, legal processes, and the growth of international organisations? (for empirical evidence see: Beisheim, 1998). And what about public policy networks and the architecture of global governance? Empirically speaking, we are living in a period of growing interdependence between unilateralism, global governance, and globalisation.

> The strict obstinacy of the U.S. and other governments towards global environmental management has triggered certain change in international politics: since consistent multilareralism is lacking, willing states are forming new alliances of political forerunners. This phenomenon creates a new form of 'multilateralsim at different speed'. (Messner, Schade et al., 1993: 247, translation by Andreas Rechkemmer)

Kyoto is an interesting case in this context, an observation that was very recently confirmed at the Montreal COP of UNFCCC and its *Kyoto Protocoll*. The protocol was initially supposed to be a milestone for the implementation process of UNFCCC – and thus for the worldwide measures to tackle the climate problem. Its ratification and entry-into-force process after Russia's ratification could contribute significantly to the efforts undertaken in this direction, but Kyoto alone is not sufficient. The USA withdrew in March 2001, or "unsigned" Kyoto and one of the main questions is, what the approach of China and India will be. Kyoto features unusual and complex entry-into-force provisions. Therefore, it could already fail before it entered the stage of its real implementation. Its first implementation phase is meant to last until 2012 – then the global community would take stock. But already nowadays projections foresee: instead of a yielded 20 percent emission reduction in 2005, we are to date some 25 percent over the emission level of 1990. An alternative can be seen to perceive climate change as a transatlantic challenge, while the EU-US relation is seen as its engine. Both partners are not so far away from each other. For instance, they agree in two major respects, i.e. engaging the private sector (joint industry perspectives, technological breakthrough), and engaging major developing countries (Ochs, 2003). The only feasible long-term alternative to Kyoto could be seen in more countries joining in a common strategy of identifying alternatives to unsustainable energy production. Such a multilateral initiative-based solution would comprise global governance aspects, e.g. market signals towards investors, research and technological development. In any case, the US seem to be in a key position – no global approach is possible without them, China and India seem unready to join as long as the US stays out: coalitions of the willing seem insufficient in the case of climate change. Collective efforts must be launched, otherwise there is no hope to tackle the global climate problem. Friedemann Müller (2003) names three points for success: (a) broad consensus on the trading process of emission rights; (b) developed countries must be on board; and (c) common research and technological development efforts must be undertaken. He sees Europe hereby in an important negotiation position.

Despite all contradictions, empirical studies admit advanced institutionalization of global environmental governance, even as of today. Some 900 intergovernmental agreements have been decided upon. And none would seriously neglect the growing role of private actors, scientific networks, and NGOs – seconded by new economic instruments such as certificates trading.[12]

12 On market based means for the public sector, reference is made to the classical Osborne, Gaebler, 1992.

To conclude these considerations: it seems that an adequate description for the present phase in international relations would be *synchronicity of realities*. While some empirical findings suggest to us that unilateralism and coalitions of the willing are a paradigm for the contemporary international order, others speak about an age of newly emerging empires. On the other hand, global governance, particularly in the field of environment or sustainable development, is definitely *practised* by a multitude of actors worldwide. Analytically speaking, it's all of it in combination. While nation-states will remain the dominant actors for some time, be it as unilateralists, multilateralists, or partners, governance will in any case, in a further globalising world, comprise new avenues and strategies for joint implementation, so-called type II outcomes or informal agreements, be they between states or in the form of voluntary networks and partnerships (Rechkemmer, 2005a).

3. The Phenomenology of Global Environmental Issues

3.1 Globalisation and the Environment

It is evident that there are close links between the phenomenon of globalisation and others commonly referred to as global environmental problems: Through the environmental implications of economic activities there is also an environmental globalisation taking place. In conformity with a comprehensive classification established by the German Advisory Council on Global Change (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltfragen/ WBGU), Udo E. Simonis names global environmental problems "changes in the atmosphere, in the oceans, and on land the causes of which can be attributed, directly or indirectly, to human activities; these changes affect the natural metabolic cycles, the aquatic and terrestrial ecological systems, as well as economy and society" (Simonis, 1999; WBGU, 1994).

Environmental problems can be categorized along three levels of appearance. *Local phenomena* are limited to the spatial dimension of states, e.g. emmissions in industrial zones, air pollution caused by traffic in urban areas, or the locally limited contamination of a river through chemical waste. *Regional phenomena* are of a transboundary, but regionally limited nature, e.g. toxic pollution of transboundary rivers, or drought periods. *Global phenomena* affect world-wide shared resources and sinks, e.g. climate change and global warming, the pollution of the oceans, or loss of genetic diversity. Although definitory considerations suggest that, following this classification, only global phenomena are of international concern, emphasis has to be laid on the fact that also local or regional problems may, and sometimes do, culminate to an extent of a global dimension. To give just two examples: a regional drought catastrophe may trigger chain reactions such as agriculture production loss, famine and poverty, migration or social unrest and local water stress can easily destabilize a region with possible implications for the whole country and its relationship to its neighbours (Rechkemmer, 2000).

On the interplay of globalisation and environment, it is obvious that not all globally known environmental problems are due to or inter-related with globalisation effects (Rechkemmer 2003). However, it is worthwhile to discriminate two different types of interaction: firstly, we know of grave environmental problems that are caused or increased by globalisation related phenomena. These are issues such as land degradation caused by unsustainable land use and production patterns due to world market forces, the climate and energy dilemma – CO_2 emissions, the greenhouse effect – due to world wide industrialization processes and 'exported' unsound technologies, or unsustainable energy consumption triggered by enhanced global mobility. Secondly, we should also mention intermediate consequences such as the erosion of environmental safety standards due to competition pressure – reference can be made, for example, to the deforestation of rain forests, or textile production patterns in Asian countries (Altvater and Mahnkopf, 1999; and 2002). These distinctions are analytical by nature, but they can help to shed light on highly complex phenomena. The inter-relatedness of such issues as mentioned above is as obvious as are the mutual linkages between the said levels of ocurrance: the local, regional and global ones (Hirst, 1997).

3.2 Clusters of Threats

After three decades of intense data collection, research and analysis, there is broad consensus in contemporary natural as well as social science as far as the identification of a number of global environmental problems is concerned (WWF, 2004). Following the article *The Global Environmental Agenda: Origins and Prospects* of James Gustave Speth (2002), the most pressing global environmental issues of our time are:

Climate change: The pallet reaches from the weakened ozone layer due to chlorofluorocharbons to global warming caused by increased, mostly industry and traffic related CO_2 emissions and other greenhouse gases like methane, leading to prognosted consequences like sea level rise, a stronger El Nino and the statistical increase of natural hazards for example in coastal or dry regions.

Loss of biodiversity: Species extinction, overfishing and exploited seas, deforestation of tropical rain forests as well as the general loss of forest resources because of economic reasons for example in developing countries lead to the loss of diversity in the genetic heritage and pose a serious threat to the equilibrium of our biosphere.

Soil erosion and desertification: Desertification is understood as increased soil degradation and steppe formation caused by human factors like overgrazing, forest clearing and unappropriate land use in the dry zones of the world with its consequences of sinking ground water level, expansion of deserts and socioeconomic problems like loss of grassland, loss of harvests, poverty and hunger, but also migration and conflict. Soil resources are also being destroyed by chemical contamination. Global consequences of desertification are a shrinking biodiversity and feedbacks with the climate problem because of the forest cover and green space loss (see also Vlek, 2005).

Stress of the seas: The mentioned overfishing combined with pollution of the seas and thus endangered fish stocks, and rising sea temperatures caused by global warming are another global phenomena.

Exacerbation of non renewable energies: The fundamental need of fossil fuels because of the globalising and growing world economy are not only the main cause of the climate problems and its epiphemonema, but they will also run short in a conceivable time period and thus being harder contested. Further development and promotion of renewable energy sources is strongly recommended and states one of the main challenges for a sustainable economy.

Garbage and pollution burden: Trade with and border-crossing traffic of hazardous waste and an in the meantime long list of diverse organic and non-organic poisons and pesticides, chemicals and wastes are all together another threat the international envinroment policy has to deal with.

Shortage of freshwater resources: Climate change, a growing world population, and in particular improper management practices lead especially in already dry regions to life threatening situations. Scenarios show that in the medium term more than half of the world's population could be affected by freshwater shortage if it's not going to be handled by prompt and strong action.

Forests: Earth's forests are often subsumed under biodiversity or genetic diversity. Such onesided interpretation of forests as natural habitats alone is not getting the full picture of their complexity and damages international approaches on an adequate management with this resource. It is at least for developing countries a privileged economic factor. Thus poverty, overpopulation and improper forest management are the biggest drivers of global deforestation.

4. From Rio (1992) to Johannesburg (2002)

4.1 Outcomes of the UN Conference on Environment and Development (UNCED)

The *Rio Summit* became *the* platform for the aforementioned concepts. UNCED was prepared by four committee sessions, so-called *Preparatory Committees* (PrepComs), involving member states representatives as well as intergovernmental and nongovernmental organisations. Great expectations and hopes were raised in the forefront, and intense scientific preparation and media coverage seconded the deliberations. As results, there are official documents and treaties, institutional changes, and an officially agreed upon follow-up process. More interesting are structural and substantive reorientations within existing or newly founded institutional bodies and so-called informal consequences, i.e. shifts in the way multilateral cooperation in the field of sustainable development has been perceived and incorporated after Rio. UNCED's well known outcomes are the *Rio Declaration; Agenda 21;* the three *Rio Conventions* (UNFCCC, UNCBD, UNCCD); the Forest Declaration; the *Commission on Sustainable Development* (CSD); the *Rio* process including the *Rio +5* conference; and a new system of world conferences.

The *Commission on Sustainable Development* (CSD), the main institutional outcome of *Rio* is aiming at playing a crucial role in the field of sustainable development, organised its work between 1993 and 2002 in annual sessions, since 2004 in two years cycles, named "review" and "policy" session. It has 53 member countries and is mandated to elaborate proposals for the *ECOnomic* and *SOcial Council* (ECOSOC) to influence and guide the UN's and its member countries' policies in the fields of environment and development. ECOSOC is the central coordinating body in this context within the UN system, also including agencies such as the World Bank. Until 1997, i.e. the General Assembly Special Session known as *Rio +5*, the Commission observed and monitored globally the progress made on the implementation of the Rio documents and treaties, and reported accordingly to the General Assembly. After Rio +5, the CSD followed up on thematic topics such as industrial development, sound tourism, sustainable agriculture, transport, or energy, and specific problems such as transfer of appropriate technologies or capacity building. The CSD spells out recommendations, e.g. concerning the internalisation of environmental costs, the changing of production and consumption patterns, trade issues such as market acces for developing countries, mainstreaming of sustainable development issues into national policies. It was also entrusted with controlling payment of 0.7 percent of OECD countries' GDP as Official Development Assistance, and thorough collaboration with the Global Environment Facility.

But the Rio +5 conference of 1997 concluded in the assessment that the so far implemented measures in support of UNCED's outcomes were not sufficient. It therefore passed resolutions stressing the need for the following desired improvements: enhanced investment into human capital; clean technologies; and the reform of price systems in order to tackle unsustainable production and consumption patterns. Delegates from more than 165 countries met in New York to this end. The finally adopted document was called *Programme for the Implementation of Agenda 21*. After the Johannesburg *World Summit on Sustainable Development* 2002 (WSSD) the implementation's oriented focus on specific themes was strengthened further. The CSD is dealing now within two years cycles with the most important clusters of challenges, i.g. freshwater (2004-05), energy/climate (2006-07), and food (2008-09). In 2016-17 there will be a synthesis cycle to evaluate the achievements and shortcomings.

A more effective outcome than the rather weak CSD was the enlargement of the *Global Environment Facility* (GEF) – which had been originally founded in 1990 as a major environmental credit programme, administered jointly by the World Bank, UNEP, and UNDP. The GEF is dealing with projects of global importance and funds the so-called "incremental costs" which arise

when projects aim to take environmental concerns into account. Meanwhile the GEF is working in six focal areas, i.g. biodiversity, climate change, international waters. Currently negotiations take place about the replenishment for the next three years cycle. The GEF is widely perceived as an effective mechanism within global environmental governance and became an important player in a rather short period of time. Another important Rio outcome or innovation is the *system of world conferences* such as *COnferences of the Parties to the Conventions* (COPs), follow-up and governing bodies' meetings of other environmental regimes, single world conferences yielding a specific thematic goal, and the Special Sessions of the General Assembly in 1997 (Haas, 2002; Fues and Hamm, 2001). Some of the important conferences were:

- *Rio +5*, 1997, New York;
- *Kairo +5*, 1999, New York, on world population;
- *Kopenhagen +5*, 2000, Geneva, on social development;
- *Beijing +5*, 2000, New York, on women's rights; and
- *Istanbul +5*, 2001, New York, on housing and HABITAT II.

As part of the formal outcomes, Rio also brought up the so-called development goals, being summed up in the paper *Shaping the 21st Century* (OECD/DAC, 1996), naming seven global goals for sustainable development. They were later, at the UN Millennium Summit, in September 2000 in New York further elaborated and adopted as the *Millennium Development Goals* (MDGs) (UNGA, 2000), following consultations among international agencies, including the World Bank, the *International Monetary Fund* (IMF), the OECD, and the specialised agencies of the United Nations (World Bank, 2000). For each goal one or more targets have been set, most for 2015, using 1990 as a benchmark. Besides, meanwhile the widely recognized so-called "Jeffrey Sachs Report" of the UN Millennium Project on the Millennium Development Goals has been published (UN Millennium Project, 2005a).

A fifth outcome of UNCED are the so-called *Rio Conventions*: firstly, the *United Nations Framework Convention on Climate Change* (UNFCCC), which entered into force on 21 March 1994 and yields to stabilise the climatic effects of anthropogenic greenhouse gas emissions – seconded by the Kyoto Protocol adopted in 1997. After a long and nerve-wracking procedure the Protocol was ratified and the last COP, recently held in Montreal, Canada, sent out promising signs for an effective implementation process. Secondly, the *Convention on Biodiversity* (CBD), which entered into force on 29 December 1993, seconded by the Cartagena Protocol on Biosafety in 2000. Both conventions were opened for signature at UNCED. The third Rio Convention, the *United Nations Convention to Combat Desertification* (UNCCD), received a negotiation mandate in Rio.

The *Rio Declaration* (UNGA, 1992) can be seen (and it is seeing itself) as a continuation of the *Stockholm Declaration* (UNEP, 2006) from 1972. Its goal is to build a „new and equitable global partnership". It says in a clear voice that development and protection of the environment cannot be met without inclusion of all kinds of actors, „states, key sectors of societies and people. " One of the basic ideas of the Declaration is sustainability, mentioned in nearly the same words as originally used in the so-called „Brundtland Report" (World Commission on Environment and Development, 1987). Principle 3 states: „The right to development must be fulfilled so as to equitably meet developmental and environmental needs of present and future generations". From today's background, likewise important is the interdependency between development and environment in Principle 4: „In order to achieve sustainable development, environmental protection shall constitute an integral part of the development process and cannot be considered in isolation from it". This premise is, widened and more complex, until today a central approach in understanding interdependencies between these policy fields. It still includes, like

Principle 5, „eradicating poverty“ as an essential and „indispensable requirement“ in sustainable development. But not only the abolition of poverty, the more ambitious aim to „decrease the disparities in standards of living“ found its way into the Declaration. Principle 25 gives an additional idea about the mentioned interconnections: „Peace, development and environmental protection are interdependent and indivisible.“ All states, especially the developed states, are called upon reducing and eliminating „unsustainable patterns of production and consumption“ (Principle 8), to share scientific understanding and technologies (Principle 9), and to „promote the internalization of environmental costs and the use of economic instruments, taking into account the approach that the polluter should, in principle, bear the cost of pollution“ (Principle 16). This polluter-pays-principle has, for example, been followed by the mentioned Kyoto Protocol from 1997. Also important in this case is Principle 15, stating that „lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation“, an important requirement for the world society to become able to prevent the most serious consequences of global warming and, more general, to become able to deal with scientific uncertainties (Bernstein, 2005). The principle (7) of common but differentiated responsibilities, which seems to be obvious and easy to understand, has been turning out again and again as a major reference point for mostly unproductive controversies between developing and developed countries in the years since Rio. This shows that there is still a long way to go to achieve the envisaged “cooperation in a spirit of global partnership”.

However, not only governments are urged to protect the environment and enabling sustainable development. In the words of the *Rio Declaration*, to ensure sustainable management of earth’s ecosystem it states in Principle 10 that „environmental issues are best handled with the participation of all concerned citizens“ to whom shall be given all available „information concerning the environment“. This statement comes together with the need not only of inner state, but also of interstate informatio flux (Principle 19). To reach all the Declaration’s goals, states and people are being encouraged to establish international agreements and „cooperate in good faith and in a spirit of partnership“. Together with *Agenda 21*, the *Rio Declaration* and the aforementioned *Rio Conventions* can be seen as a part in the effort to fulfil this postulation.

The *Agenda 21* (UN, 1992) provides a comprehensive plan of action for the 21st century. It is addressed to multiple recipients and aims at reaching sustainable development throughout the world. The some 350 pages long Agenda consists of forty chapters, divided into four sections. The Agenda can be seen as a blueprint on how to achieve sustainable development. It is far reaching and addressed to nations, cities, local communities, businesses, women, indigenous people, and to the world society as a whole. It deals with many different issues: environment, development, poverty, farming, forests, education, water, and also radioactive wastes and greenhouse gases are handled by the Agenda. Its ambitious goal is to show how sustainable development can be reached and how someone should act on a global, regional, or local layer to make it possible. To do this, the Agenda begins by specifying in Section I the „Social and Economic Dimensions“, the need for international cooperation, the challenge of poverty, the necessary change of consumption patterns, problems regarding demographic transition, the need of protecting human health and the necessary integration of „environment and development in decision-making“. After this first assessment, the Agenda continues with Section II called „Conservation and Management of Resources for Development“, giving detailed clues on how to manage different parts such as the global atmosphere, agricultural areas and freshwater resources. It provides information on how to combat desertification, how to deal with toxic wastes of all kinds and how to conserve biological diversity. The third Section, „Strengthening the Role of Major Groups“, pays attention to a players mostly not even mentioned in the 1972 *Stockholm Declaration.* It’s according to the growing role NGOs, indigenous people, women, scientists, and the youth must be playing when the goals of the *Agenda 21* ought to

have a chance of being implemented. Therefore, the „Means of Implementation“ are consequently the IV. Section of the document. In this part, the speech comes to financial contributions, technology and knowledge transfer, making environment and development education available, capacity building, and the need of international treaties.[13] Martin Jänicke calls the *Agenda 21* a strategic steering model as a consequence of general reform tendencies in the public sector of developed countries, reflected in the concepts of 'public management'. The central aspects of this steering model are consensual target identification, integration of environmental concerns into the pollution pace sectors, participation, monitoring, and coordinated multi-level implementation from global to local.

Of course, critical remarks have to be made as well. Due to a certain clash of interests, according to some critics, some themes were not at all or only weakly reflected, e.g. biotechnology, the contamination of the oceans, or export of wastes. Imke Keil (1994), for instance, criticizes further that the calling for obligations was one-sidedly directed towards the Third World, while the North not really claimed its adequate responsibilities and thus did not fully define its own necessary obligations. For example, the 0.7percent of GNP ODA was promised but never generally implemented by OECD countries. The North also pushed the enlargement of the *Global Environment Facility* (GEF) – which had been founded in 1990 as a major environmental credit programme, and was administered jointly by the World Bank, UNEP, and UNDP – while developing countries wanted to create a new United Nations environmental fund. Nowadays it is fair to conclude and widely accepted that the creation of the GEF was the right strategy. As far as the *Rio Conventions* are concerned, Keil laments that UNFCCC is binding but only a framework without a clear time plan. *United Nations Convention on Biological Diversity* (UNCBD) is also binding but lacking control procedures and sanctions as well as a balance of interests between economic use and conservation of genetic diversity, or the participation of the South in matters pertaining to biotechnology. She also criticizes that the forests did not receive a convention of their own, only a rather general declaration on their sustainable use. Furthermore, despite great public interest, intense research by science, and significant NGO participation, the clash of interests between North and South, governments, industries, and the civil society could not be avoided. For Keil, UNCED provided great findings and good plans, but too many declarations and conventions without sharper enforcement mechanisms.[14]

However, the question of whether or not *Rio* has been successful, or, more precisely, has truly met all the needs of environment and development concerns, is not the purpose here. Rather, the traces should be followed which give the impression that the Earth Summit of Rio has been *the* locus in recent political history when and where "postmodern concepts" of international relations, such as the phenomenon of the concept of global governance, have had a significantly strong performance and impact on the newly designed and agreed upon treaties, programmes and regimes. It ultimately found their probably most consequent implication within the conceptual design of the *UN Convention to Combat Desertification* (UNCCD), but also within other Rio mechanisms. In other words: in the following step the more theoretical considerations of chapter 2 will be matched with the empirical findings of the *Rio* process.

4.2 What Was the Uniqueness of the Rio Conference?

Benefiting from a historical momentum, and surfing on the wave of the post-cold war new world order philosophy, the *UN Conference on Environment and Development* (UNCED) became *the* platform for innovative governance tools, consisting of various types of approach-

13 The initially foreseen Earth Charter was neither part of the Agenda nor adopted separately at *Rio.*

14 See as an elaborated study concerning "compliance" Chayes and Chayes, 1995.

es and actors. Understanding had been reached among delegates that general and specific goals were to be mentioned along with accompanying financial, institutional and economic measures. Nevertheless, tension emerged between developed and developing countries, the latter insisting not to be instructed on how these countries should solve their environmental problems. Developing countries also dwelled on the fact that the by far larger share of global pollution is caused by the North. They asked for compensation, while, probably as a reaction, Northern countries did not agree on broad technology transfer. During the *Preparatory Committee sessions* (PrepComs*)*, the impression emerged at times that supranational concepts would have a difficult standing versus established traditional sovereignty-based ideas about international cooperation. However, hot issues such as balancing out economic growth and free trade, and also the question of optimal means for financial transfer measures for the sake of environmental improvements, still made it into the drafts.

The *Rio Conventions* are dealing with the problems they were created for, at least partly, in a new fashion. For example, at the Third Session of the *Conference of the Parties* to UNFCCC (COP 3) in December 1997 in Kyoto, Japan, industrial countries committed themselves in the Kyoto Protocol to reduce or stabilize their greenhouse gas emissions. No commitments had been foreseen for developing countries. At and after COP 3, further agreements on the implementation mode of Kyoto, the so-called Kyoto mechanisms were agreed upon: emission rights trading through certificates; joint implementation of climate programmes between developed countries; and the *Clean Development Mechanism* (CDM) with developing countries. These mechanisms are market based, involving the private sector and science. They aim at creating economic incentives for investment and technological change, so as to render the implementation of Kyoto as cheap as possible, also foreseeing indirect investment to developing countries. Further provisions are enhanced multilateral assistance for climate protection programmes in developing countries through GEF and through bilateral channels, transfer of sound technologies, capacity building, and the submission of periodical national communications containing detailed overviews on sources and sinks for greenhouse gas emissions along with national strategies for their reduction.

The CBD promotes overall protection of biodiversity and sustainable use of biological and genetical resources along with a just and balanced distribution of advantages emerging from this use. It also contains restrictions and guidelines for access to genetical resources and their use, technology transfer, and bio safety. The focus is on national activities including an obligation for regular reporting. Developed countries function as financing entities together with the GEF. It is also important to name the corresponding Cartagena Protocol on Biosafety, which addresses dangers deriving from transboundary trade of genetically altered organisms (CBD, 2000).

UNCCD features the strongest focus on postmodern or global governance concepts among the *Rio* treaties. For example, its bottom-up approach is linked with the epiphenomena or sub-concepts of participatory eco-development and partnership agreements within given multi-actor networks. One of the key questions, which the drafting fathers of the Convention undertook to reflect upon was: How can UN agencies link up with civil society being a rich source of knowledge, expertise and a necessary condition for ownership? The background for this both conceptual and strategic scenario was evident, i.e. the ongoing crisis of multilateral organisations backed from the functionalist matrix of post-World War II politics. At the same time, the new tools were not only mere reactions to undesired overall political conditions; they supported proactively new waves aiming for more effective environmental regimes (Rechkemmer, 2004; see also Young, 1994; 1999; 2005. On the implementation of the Rio Conventions see Swiderska, 2002).

It should come as no surprise that a policy field like global environmental governance – consisting, by definition, of problems that transcendent scope and abilities of national states – was an (empirical) driving force for a conceptional shift. It should be recalled that the Westphalian system is perceived as locus classicus for modernity in international relations, featuring the concepts of sovereignty and territoriality as underlying principles for interstatehood: states aim to preserve both sovereignty as well as their territorial identity, reflected in national legislation and enforcement procedures, and are the sole dominant actors in the international society. The state, a spatial unit, results in the fundamental ordering of international relations through a central reliance on dominium based conceptions according to the notions of Roman law.

Yet, UNCED stands for significant change in conceptualising international relations, i.e. the migration from modernity to post-modernity. At this point, it has to be recalled also that post-modernity in international relation should be understood as a conceptualisation in itself, and subsequently has to be taken as a condensed "mental construct" drawn from empirical observations of evident changes in the way global actors cooperate both in structural as well as in normative terms.

The Earth Summit centralised cooperative activities of environmental and development targets, and largely displaced formerly established and notoriously repeated state sovereignty oriented patterns and procedures in environmental politics, i.e. national policy and legislation frameworks following internationally agreed upon not binding standards, through the community oriented procedures featured in the legally binding *Rio Conventions* and further conference outcomes. Subsequently, environment and sustainable development became major subjects to international law. The conceptual shift can be understood as a process of desired structural or institutional change, due to a gradually transformed shared understanding of the underlying normative terms of reference, institutional rules and/or functional settings of the international society. We may understand *Rio* as a case of *international state formation* that does not mean formal cession of sovereignty to supranational institutions, but rather relocates individual state actors' de facto sovereignty to transnational authorities, whose result is the emergence of a new governing system, which breaks down the spatial coincidence between state-as-actor and state-as-structure. To illustrate the idea of *Rio* as locus classicus for a post-modern understanding of international relations, *seven phenomena of postmodernity* will be used that are characteristic for Rio and its outcomes. These theoretical reflections on the provided conceptional framework are necessary to grasp the difference *Rio* has made.

(1) As the first phenomenon of post-modernity one can identify an enhanced political readiness of conference Parties to widely sacrifice the classical prerogative of individual, national sovereignty considerations for the sake of collective state formation and a multilateral understanding of sovereignty, i.e. *the construction of collective regulatory regimes supreme to the national policy-making level*. This first phenomenon is of a political nature and can further be explained within the context of the process of identity formation among states (Wendt, 1996). In the Rio case, the rather newly emerged awareness of *global public goods* served as a reference point for collective policy formulation in the sense of the aforementioned (see also Kaul, 1999; Albin, 2003).

(2) Contradictory to a positivist perception, international law is not to be seen as constitutive for political order, but rather coincides with sociohistorical, extra legal patterns that reflect and reshape the political reality. The step ahead to turn scientific research results and political desiderata concerning the global environment into an extensive framework of supranational treaties and agreements of a binding nature including instruments of monitoring, evaluation, and dispute settlement, reflects another transformatory quality, more precisely vis-à-vis classical legal concepts underlying Westphalia. Law is a primary tool in the socialisation of the indi-

vidual, providing an image of both factual and normative aspects. International law functions in such a manner, as an institutional device for communicating to the policy-makers of states a consensus on the nature of the international system. Therefore one can identify the second phenomenon of post-modernity at *Rio* with the state community's readiness to sacrifice the concept of a dominium-like understanding of territoriality in environmental politics for the sake of yielded supremacy of a supranational process of legislation. This second phenomenon is of a truly legal nature, and may have been triggered by the insight of the inter-wovenness of global issues.[15]

(3) This leads to the third phenomenon of postmodernity flagging out at UNCED: *the constructing role of knowledge in international relations, and its coefficient, the learning capacity of institutions.* Referring to the conceptual elaborations of Ernst B. Haas, Peter M. Haas and Alexander Wendt, and in analogy to the findings of main stream regime theory, the factors of knowledge and information are at times rated higher than genuine political will as a result of national interest of hunger for power. This spirit highly influenced *Rio,* where, as never before, the "epistemic community" had not only a big say but also significant influence on the substantive conference outputs (Haas, 1993; Wendt, 1996; and Nielson and Tierney, 2003).

(4) The fourth phenomenon of postmodernity is of a conceptual nature, and refers to *the semantics* promoted at *Rio.* Its most prominent notion is the nexus created between environment and development – expressed in the concept of sustainable development. This term is a typically "postmodern cross-over" of two formerly autonomous concepts, whose merger constructed a whole new field of semantic reference, which influenced strategic, structural and scientific re-orientation processes alike, and thus proved to construct new realities:

> Agenda 21 and the Rio Declaration modified an international understanding of development that went back to the end of World War II. Essentially, development in this context is an international term of art encompassing four basic elements that are necessary to ensure and improve human quality of life and opportunity. These are 1) peace and security, 2) economic development, 3) social development or human rights, and 4) supportive national governance. For more than half a century, we have measured human progress in these terms, and there has been a great deal of progress. Environmental degradation has been considered a price that we necessarily pay for this progress. The concept of sustainable development changed this definition of progress by incorporating environmental protection and even restoration into the definition of development. Instead of making progress in conventional development at the environment's expense, or protecting only the environment, the idea is to work toward both conventional development and environmental protection at the same time. That concept is the irreducible core of Agenda 21 and the Rio Declaration (Dernbach and Feldman, 2003)

But there's more to say. Rio also brought about the so-called *sustainability triangle*, a conceptual matrix in which productive economic growth is linked with social justice and ecological sustainability, and thus forms a holistic framework for perceiving development cooperation, environmental protection and good governance as a unity. This concept resulted in the buzzword "combat poverty – promote private economy – preserve natural resources". It refers to developing countries as well as developed countries, and rates environment, social and economic affairs as equally valuable components of post-*Rio* policy. In the aftermath of UNCED, a forth dimension was added to the triangle, and this one thus turned into a square: participation

15 It might be necessary to recall that the shift to postmodern paradigms is gradual and complementary, i.e. while basic elements of modernity remain vaild – e.g. the state as a principal actor in international relations –, others are sacrificed for the sake of a new conceptual reality, rating community oriented values higher.

and with it explicit reference to good governance as a political means rounded up the concept of holistic sustainability (CSD, 1996).

(5) The strategic and structural downstream consequences of the aforementioned semantics, or conceptual achievements, mark the fifth phenomenon of postmodernity: the process of *reshaping and re-structuring policies and strategies as well as institutional settings by national governmental bodies and international agencies* alike. *Rio* resulted in the formulation of cross-sectoral, integrated policies and strategies, both at national and international levels, such as national strategies for sustainability, or the new international development frameworks of the World Bank (*Poverty Reduction Strategy Papers,* PRSP) or the European Union (New Cotonou Agreement). Moreover, institutional reform was an important agenda item. Administration entities created according to the notions of functionalism were told to be out.[16] In were new, small, smart and highly decentralised secretariats for facilitation management, e.g. the Convention Secretariats. Operations were to be carried out in a network manner, i.e. while the *Rio* Secretariats were to manage negotiations and facilitate policy formulation, a system of agencies present in the field, i.e. UNEP, UNDP, WMO, UNESCO, IFAD, FAO, The World Bank Group and others, were expected to jointly implement the treaties and programmes with state governments. Also, UN institutions adopted their internal policy guidelines in accordance with the cross-sectoral outcomes of *Rio.* For instance, UNDP reformed their policy unit, and created the *Sustainable Energy & Environment Division* (SEED), which was designed to reflect the integrated nature of *Agenda 21* and the *Rio Conventions*.[17] Another example for post-Westphalian institutional design is the already mentioned *Global Environment Facility* (GEF) – a multi-agency fund of a truely cross-sectoral nature.

(6) The sixth phenomenon of postmodernity can be identified with *the emergence of the concept of global governance*, more specifically of global environmental governance, that had high season at UNCED, or principally started to become fashionable there. In particular, global public policy networks, the involvement of NGOs and other civil society actors, transnational as well as local corporations and the scientific community were prominent issues in *Rio,* and subsequently found their way into the newly developed cooperation frameworks and treaties.

(7) The seventh phenomenon of postmodernity can be identified with *the characteristic mix of progressive governance tools* that had been elaborated for UNCED and were meant to render the implementation process of *Agenda 21* and the Conventions more effective. Strategy fragments such as the so-called bottom-up approach, participatory aspects of policy formulation and implementation, a decentralised logic of intervention, or the new "partnership agreements" – meant to replace traditional development financing concepts –, but also even more informal tools such as the type II outcomes are to be mentioned in this context.[18]

There may be more such post-Westphalian phenomena that can be traced at UNCED and its follow-up process. However, the seven mentioned above are characteristic and cover a wide range of policy formulation and state formation aspects, as they relate to political, legal, epistemic, semantic, structural, organisational and strategic notions.

4.3 Assessing the 2002 World Summit's Outcomes

A lot has been written on the *Rio Earth Summit*, analysis and evaluation has been provided throughout. In June 1997, at the 19th Special Session of the United Nations General Assembly

16 This debate will be picked up in chapter 6 again.

17 A detailed description of its organigramme and responsabilities is given in UNDP, 1997.

18 The more participation-related tools are thoroughly discussed in Lazarev, 1994 and Biermann, 1998.

called *Rio +5*, thorough stocktaking of the progress made so far in the implementation of UNCED's results was done. Of course, this process was identified as insufficient. As a result, the New York based *Commission on Sustainable Development* (CSD) was entrusted with an enhanced mandate, its programmatic priorities were reset for the following five years: climate, protection of forests, enforcement of environmental institutions. But the real *Rio* stocktaking took place at another occasion, decided upon by the General Assembly's 55th Session in 2000: the *Rio +10* conference called *World Summit on Sustainable Development* (WSSD) taking place from 26 August to 4 September 2002 in Johannesburg, South Africa. Preparation of the WSSD was in the hands of the CSD. Four *PrepCom* meetings were held in 2002. Part of this preparatory process was also the 2000 *United Nations Millennium Summit* bringing about the *Millennium Declaration* whose development goals were reinforced by the WSSD. Also the WTO ministerial conference of Doha, Katar, November 2001, and the International Conference on Financing Development in Monterrey, Mexico, March 2002, anticipated the Johannesburg meeting. The WSSD, the largest conference ever to date, provided an opportunity for a comprehensive review of the achievements on sustainable development since *Rio.* At the same time, it was expected to provide a new impetus for a breakthrough on urgent matters. However, prior to the conference in Johannesburg, it was already clear that the record of the *Rio* decade left a lot to be desired in terms of effectiveness and achievements of the agreements and action plans described above. This resulted in both raising expectations and doubts in equal measure. Would the world summit finally bring about the turning point in international environmental policy that many had demanded for so long? Would it be capable of providing the decisive impetus to cooperation on development issues?

When it comes to assessing the record of results from Johannesburg, the skeptics are having a field day. In their eyes, the final document points to progress on a number of issues, but the qualifications added to nearly every conclusion leave them skeptical. World fish reserves *ought to* be protected by 2015. The most dangerous toxins to the environment are to be banned, but violators have *no sanctions* to fear. Subsidies for fossil fuels should be reduced, though *no strict time frame* was agreed on. There are also a number of impressive sounding declarations of intent: access to freshwater was repeated and basic sanitation was newly established, energy production from non fossil fuels is to be fostered, and the necessity of debt relief for the poorest countries was recognised. But, here too, the prospect of a breakthrough is questionable given the lack of concrete plans of action and clear mechanisms for imposing sanctions. The final documents are full of lax time frames and goals, open questions regarding financing and a lack of ideas of how to implement the plethora of good intentions at the institutional and organisational level.[19]

The German ministerial representatives Jürgen Trittin (former Minister for the Environment) and Heidemarie Wieczorek-Zeul (Minister for Economic Cooperation and Development) interpreted the record more positively. Above all, they noted that measures to ensure safe drinking water for the world's poor, one of the EU's biggest goals, were achieved. According to them, another success story was the agreement by the US – despite a rejection of concrete time frames and quotas – to the basic goal of putting an end to species extinction and to reducing the dangerous effects of chemicals. Moreover, they described regulations for corporate liability, fisheries and a review of modes of consumption and production in industrialised states, as well as the mention of "global publics goods" such as air and the oceans, as steps in the right direction. The German representatives viewed energy as a central issue. Providing access to the world's two billion people living without electricity with an environmentally sound form of this energy was, along with the previously mentioned issue of access to water resources, the other of the

19 For a critical analysis of the Johannesburg Summit see Speth, 2003 and La Vina, Hoff, DeRose, 2003.

two major achievements of the summit. For many observers, energy and water are the issues that most clearly embody the notion of sustainability and are therefore the most important. The theory goes that securing basic provisions for electricity and water helps fight poverty, improves health, increases economic opportunities and protects the environment, provided renewable energy sources are used. Yet even before the conference, the EU had lowered its sights. For example, the EU proposed increasing the share of electricity produced by renewable energy sources to 15 percent by 2010, only marginally up from the current figure of 13 percent. Nevertheless, this modest attempt by the EU was shot down by the US and OPEC member states.

UNEP Executive Director Klaus Töpfer, who had helped shaping the 1992 *Rio Summit* when he was German Minister for the Environment, drew his own conclusions as head of the UN Environment Programme (Töpfer, 2002). For him, important progress was made at Johannesburg. He was initially concerned that the summit would, in the end, reveal itself as merely cosmetic. In fact, Töpfer let it be known that he considers the *Plan of Implementation* of the WSSD – the most important final document – insufficient. Still it would be inappropriate to declare the summit a failure. First, the very fact that it took place is in itself important and it shows continuity with the *Rio* follow-up process. This has helped put global environmental policy back on the international agenda. The identification and acknowledgement of the central issues and goals of sustainable development in the final documents is also important. This provides an updated and nearly complete frame of reference for future initiatives and negotiations, be they unilateral, bilateral or multilateral. And 190 states were able to agree on a detailed list of actions, something that could not have been assumed prior to the summit. Thus, a common vision is in place and many important issues were taken into account. The key question is whether the plan of action, which is based on an already minimal consensus, will be effectively implemented. The current established institutional framework for international cooperation and the shrinking willingness of rich states in particular to cooperate on a multilateral basis leave room for doubt.

It became one of the rituals of Johannesburg to criticize the US and denounce them for the immobility on climate change issues in particular. However, upon closer examination, this criticism appears to be too one-sided. Japan, for example, shot down the demand for more foreign aid. Brazil refused to protect its rainforest according to international standards. And France insisted on maintaining EU agricultural subsidies. Particularistic state interests characterised the global meeting. There is a firm trend discernable among OECD member states in particular of renewed emphasis on protecting their own interests and concern with solving national problems. This is counter to the notion of global governance which would entail seeking consensus at the international level at the expense of particular interests. To this extent, revival of the wave of multilateralism of the early Nineties is currently out of sight. Explanations offered for this development include the weak economy and protectionist tendencies, both have to be seen in front of the ubiquitous concept of globalisation.

Without doubt, there is no momentum for a global collaborative effort by *all* UN member states to solve common problems at this stage, however necessary and desirable that would be. Furthermore, we cannot and should not expect the organs of multilateral cooperation, the UN institutions, to provide results that are not brought about by the member states working in concert. Inefficiency and chronic underfinancing of the existing instruments simply add to the difficulties. This could be the hour of a practical middle way, along the lines pursued by the EU's offensive on energy policy outside the official summit activities. Initiatives of individual states or groups of states and their allies of convenience in so called "coalitions of the willing" seems to be the most promising way out at the moment of the dilemma posed by the current gridlock in the implementation of important environmental and development measures. It could soon

lead to first stage victories, for example in the area of climate protection, particularly after Russia's ratification of the Kyoto Protocol, and overcome the extensive inertia. Gerhard Schröder, former German Chancellor, succeeded in Johannesburg in getting the EU and some 90 other states to sign a declaration calling for the promotion and firm establishment of renewable energy that was outside the framework of the summit and goes well beyond the conclusions of the final document.

These important moves forward which go well beyond the official conference results were arrived at parallel to the summit and are not part of the tediously negotiated final documents. The strength of these initiatives lies in the very fact that they are not orientated toward the least common denominator, rather they are manifestations of the political intentions of those who are truly interested in progress and change. That improves their chances of success. It may well be that a strategy that seeks to unite progressive states of the world would make the transition to global sustainability easier. The entry into force of the *Kyoto Protocol,* for example, which was roundly praised at the world summit, could set a new dynamic in motion that helps promote the use of better energy technology, not just in the rich North, but also in the poor South. The second glimmer of hope lies in the EU and other states that want to lead the way, both at national level and in cooperation with developing countries, even without concrete goals set out at Johannesburg. The initiative announced by Schröder can be considered an example – one of the highly contested so called "Type II outcome" of the summit. Such initiatives fit right into the above described picture of "synchronicity of realities" that marks the current situation in world politics. Also at the last COP of UNFCCC and the *Members of the Protocol* (MPO), Montreal 2005, a so-called "two-track approach" has been traced, which gives enough space for precusors and keeps contact to stragglers. (for further information see UNFCCC, 2005)

World summits organised by the United Nations will still need to take place given that they alone provide a suitable platform for global communication and interaction, not the least of which with civil society. The critical question remains whether the goal of getting *all* participating countries to sign final documents, along with the corresponding compromises in formulations that entails, should be abandoned. If at future summits the international community were to free itself from the pressure for consensus, and instead used such summits as global forums for forming coalitions of the willing around decisive issues, the interests of those most affected by environmental destruction and underdevelopment might well be better served (Rechkemmer, 2002).

5. The Post-Johannesburg Phase and the World Summit 2005

In this step, four reports will be presented which were prepared for the World Summit 2005. Since this World Summit, held in conjunction with the 60th Session of the General Assembly of the UN, was also called the "MDG plus 5 Summit", these reports put a lot of emphasis on the nexus of the UN reform and the field of sustainable development. Even though environmental concerns are apart from the Millennium Ecosystem Assessment not in the center of these reports, all of them give clear evidence that the environment plays a crucial role – more than ever before. So the main conclusion for the topic stressed in these papers is that the UN reform has to take environmental matters into account in order to achieve its main targets: security, development, and human rights. After the overall reform context will have been provided, the next chapter will deal exclusively with reform questions concerning international environmental governance.

High-Level Panel Report

In September 2003, UN General Secretary Kofi Annan created the *High-Level Panel on Threats, Challenges and Change* to assess what challenges lie ahead the United Nations, how well the UN system has been addressing these challenges in the past and how it will have to be reformed to ensure peace in future decades. In December 2004, the 16 members of the Panel released their report „A more secure world: Our shared responsibility" (HLP, 2004). While in 1945 the most serious threats to international peace were classical interstate wars, there is a much more differentiated perception in the Panel´s report, represented by six clusters of threats that have to be faced:

- Economic and social threats, including poverty, infectious disease and environmental degradation;
- Inter-State conflict;
- Internal conflict, including civil war, genocide and other large-scale atrocities;
- Nuclear, radiological, chemical and biological weapons;
- Terrorism;
- Transnational organized crime.

These threats are interdependent and therefore they can not be solved one by one but must be addressed simultaneously. The *Stakeholder Forum for a Sustainable Future* summarizes that the Report includes „links between abject and continuing poverty, disorder and environmental degradation" and also „the effects of climate change on natural disasters and consequent human suffering" (Stakeholder Forum, 2004: 5). This means in the words of Henrique Cavalcanti (2005: 159): „It addresses directly the so-called 'soft' threats of poverty, infectious disease and environmental degradation, and makes specific reference to food security". Environmental concerns play a certain role in the report while they are linked with many other threats to human security. For example, diseases as malaria or HIV/AIDS and their abatement must always be seen in the context of poverty, violence and environmental degradation. They „feed one another in a deadly cycle" (HLP, 2004: 20). Just looking at the size of the problems, Andrew Mack (2005) from the Human Security Centre notes: „If the criteria for a security threat is events 'that lead to large scale death'", then hunger and disease are clearly far greater security threats than war and terrorism combined. More than 16 million people a year die from disease; 14 million from hunger. Direct deaths from wars rarely exceed 100,000 annually today while the toll from international terrorism is tiny."

These numbers could even be rising as the *Panel* finds it likely that if current trends continue there could be a „persistent and possibly worsening food insecurity in many countries, especially in sub-Saharan Africa“ (HLP, 2004: 27). This is due to land degradation, water scarcity, deforestation, and additional environmental problems. Another large role play natural disasters that tend to happen with increased destructive potential and will affect an even growing number of people in the future, added by large-scale economic losses. Appropriate to these predictions the United Nations University estimates in October 2005 that by 2010 there will be 50 million so-called „environmental refugees“ that will have to be taken care of. In the words of Janos Bogardi: „This new category of 'refugee' needs to find a place in international agreements“ (UNU, 2005). With his statement, Bogardi shares the concerns of the *High-Level Panel* when it urges the international community to react on the lack of factoring environmental concerns „into security, development or humanitarian strategies.“ (HLP, 2004: 27) The Panel annotates that not only there is a lack of multilateral treaties for these kinds of threats, but likewise existing treaties are either insufficient or inadequately implemented. The international community has not been able to create a necessary global partnership capable of dealing with the challenge of sustainable development at all required aspects and should therefore focus its fragmented political landscapes, making indispensible synergy effects useable.

One of the most compelling issues in the eyes of the *Panel* is global warming. It should be addressed by increasing financial contributions to continuing development of renewable energies and decreasing subsidies for fossil fuels, by keeping up with the Kyoto targets and by creating a long-term strategy for reducing greenhouse gas emissions on an international level. For assisting the most vulnerable people, especially UNEP, UNDP and the World Bank should be working more closely together, enabling all potentially affected countries to reduce their vulnerability and decrease the number of deaths by natural disasters of all kinds. In order to become capable of doing so, UNU is beginning to create a measurement of vulnerability (Birkmann, 2005).

Millennium Ecosystem Assessment

The *Millennium Ecosystem Assessment* (MA) is a cross-sectoral study on the status of earth`s ecosystems. After several years of work, in March 2005 the main Synthesis Report was published (MA, 2005), supplemented by more specific reports in the following months. Its working mode was comparable to the IPCC`s, with more than 1,300 authors working on it and more than 600 scientists reviewing its findings. The MA is the first comprehensive study to assess the situation of 24 different ecosystems and their provisioning of essential services, by subsumizing existing scientific knowledge. The main findings are that over the past 50 years, humans have changed their environment more extensively than in any other comparable time period, that the resulting net gains in human well-being have been paid by degradation of many ecosystem services, combined with apparent degradation of 60percent of the assessed ecosystems, that this degradation could accelerate in the first half of the 21st century while it`s already posing a threat to achieving the *Millennium Development Goals,* and that reversing the continuing degradation requires a major shift in international policies that currently is not underway, but nevertheless still possible.

The Synthesis Report establishs also a connection between the degradation of ecosystem services and security issues. In the eyes of the MA, security refers to „safety of person and possessions, secure access to necessary resources, and security from natural and human-made disasters.“ (MA, 2005: 54) Following that definition, there are a number of security threats named by the MA regarding to environmental damage. First of all, ecosystem services provide people with lots of goods like food or water. A change in the ecosystem`s functionality can pose a threat to this supply and therefore count for a menacing deficiency. Furthermore, ecosystems manage

important regulation services, e.g. on climate, freshwater or diseases, and they can be a protective barrier to people against disasters.[20] Damaging the environment can therefore lead to increasing economic losses and to rising numbers of disaster victims. Last, stable social networks depend on cultural services which deteriorated ecosystems might no longer be able to provide, leading to instabilities in a societie`s bases. Especially poor people must be seen threatened because they are more dependent on ecosystems and their services and thus more vulnerable to their degradation. Fishery capturing and water supply have been proven to be managed beyond sustainable limits, making it unlikely that they will be able to supply ever growing populations, maybe not even the present ones for much longer. This can become even more serious because of what the MA calls „nonlinear changes", the likeliness of abrupt changes within ecosystems, possibly followed by collapsing service provisioning. This has been observed in recent years for fisheries in some places and it is likely to appear in others as well.[21]

UN Secretary-General: *In Larger Freedom*

In the forefront of the 2005 World Summit, UN-Secretary General Kofi Annan presented in addition to the *High-Level Panel* his own report called „In Larger Freedom: Towards Development, Security and Human Rights for All" (Annan, 2005). In his report, Annan did not want to show all areas in which action is needed, but to propound a realistic „agenda of highest priorities" (Annan, 2005: 3) for the forthcoming UN reform. He wanted to pay equal attention to three basic pillars of the United Nations: Development, security, and human rights. With this choice, it is clear that environmental issues do not play a large role. The fragmented landscape of environmental treaties needs to be „streamline[d] and consolidate[d]" (Annan, 2005: 51), building a more integrated approach on environmental protection, including countries utilization of synergy effects, leading to an „integrated approach to sustainable development" (ib). However, several slight links between environment and human security issues can be found at a closer look. Annan mentions that „access to modern energy services" (Annan, 2005: 14) is a necessary condition to reduce both poverty and environmental degradation. In addition, access to drinking water and sanitation is needed as an integral part of development strategies.

The link between poverty and environment is repeated later in the report, noting that abolition of poverty and establishing sustainable development will not be successful if the environment and its resources are not going to be protected vigorously. Desertification already led to millions of environmental refugees, looking ahead there might be hundreds of millions sharing the same fate – which must be combatted by implementing the UNCCD. The observed and ongoing loss of biodiversity threatens people`s health, their food and water support and makes them even more vulnerable to natural disasters and to effects of global warming, a burden shared by flora and fauna of affected regions. Implementing the CBD is seen as a way to reverse this trend. Climate change is likely to have significant effects on extreme weather incidents, possibly leading to additional or aggrevated droughts or storm events like hurricanes. These events usually pose greater threats to least developed countries than developed ones because they can protect themselves even less and to not have the capacity for effective adaptation measures. Annan says that further mitigation strategies must be developed in order to prevent global warming effects from harming people, and that an ambitious international framework for the time after 2012 must be agreed upon.

---

20 During the 2004 tsunami there occurred less damage to areas covered with mangroves regarding to WWF 2004; and while deforestation seems to have no effect to severe floodings regarding to CIFOR and the FAO, it does play a role in local floodings (FAO, 2005). But most likely, increasing flooding damages are provoced by man-made changes like river canalization and a growing population density in vulnerable areas (MA, 2005: 54).

21 Studies centred around "resilience" put abrupt shifts as one of their major interests of research into the middle of their analysis. See for example Berkes, Colding, Folke, 2003.

The hazardous effects of natural disasters can, as the Indian Ocean tsunami showed, lead to extreme casualties. Therefore, establishing an early warning system is one of Annan`s strategies to mitigate such losses in the future. Talking about the findings of the *High-Level Panel,* the Secretary General states that environmental degradation, poverty and diseases can have effects as catastrophic as terrorism or international war.

Report of the UN Millennium Project

In 2002, the United Nations General Secretary commissioned the *Millennium Project* (MP) to develop a plan of action on how the *Millennium Development Goals* (MDGs) could be met. In January 2005, Jeffrey Sachs presented as head of the Project his report to Kofi Annan: „Investing in Development: A Practical Plan to Achieve the Millennium Development Goals", often simply called the „Sachs Report" (UN MP, 2005a). More detailed information on environmental issues can be found in the report of the Project`s Task Force on Environmental Sustainability: „Environment and Human Well-being: A Practical Strategy" (UN MP, 2005b). The main focus of the report is on poverty eradication through development. In addition, it mentions several links between environment and the MDGs beyond the goal 7 (on ensuring environmental sustainability) and shows the inderdependency between both fields. One necessary, but on itself not sufficient condition for reaching most of the goals, is the improvement of available energy services. Basic social services like health or education depend on energy as do machines that allow people to work in factories and earn higher incomes. Thus, energy use is crucial for reducing poverty, and it can disburden local ecosystems from exploit pressure. While developed states are slowly turning to biomass as an alternative to fossil fuels, its unsustainable use in developing states can severely damage the environment. Through the connection between energy, poverty and environment, there is a significant but somewhat indirect link between environment and nearly all MDGs (UN MP, 2005a: 30).

In fact, no MDG can be reached without a healthy environment. Protection from natural disasters, disease control, provision of food and clean water are services that an intact environment offers to people. The poorest people are extremely vulnerable to diseases, droughts or harvest-destroying pests, and thus their life expectancy can sink to only 40 years. Poor societies are therefore more likely falling into conflict, as are hungry or thirsty ones. And: „As the context for all human behavior, the environment influences educational opportunity, gender disparity, water quality and sanitation" (UN MP, 2005a: 33). By making these statements, the reports show links between the environment and every single one of the *Millennium Development Goals* (UNEP, 2005).

Eradicate extreme poverty and hunger	• Livelihood strategies and food security of the poor often depend directly on functioning ecosystems and the diversity of goods and ecological services they provide. • Insecure rights of the poor to environmental resources, as well as inadequate access to environmental information, markets, and decisionmaking, limit their capacity to protect the environment and improve their livelihoods and well-being.
Achieve universal primary education	• Time children, especially girls, spend collecting water and fuelwood can reduce study time.
Promote gender equality and empower women	• Time women spend collecting water and fuelwood reduces their opportunity for income-generating activities. • Women's often unequal rights and insecure access to land and other natural resources limit opportunities for accessing other productive assets.
Reduce child mortality	• Water and sanitation-related diseases and acute respiratory infections, primarily caused by indoor air pollution, are leading causes of mortality in children under age five.
Improve maternal health	• Indoor air pollution and carrying heavy loads during late stages of pregnancy put women's health at risk before childbirth.
Combat major diseases	• Environmental risk factors account for up to one-fifth of the total burden of disease in developing countries. • Preventive environmental health measures are as important, and at times more cost-effective, than health treatment.
Develop a global partnership for development	• Since rich countries consume far more environmental resources and produce more waste than poor countries, many environmental problems (such as climate change, loss of species diversity, and management of global fisheries) must be solved through a global partnership of developed and developing countries.

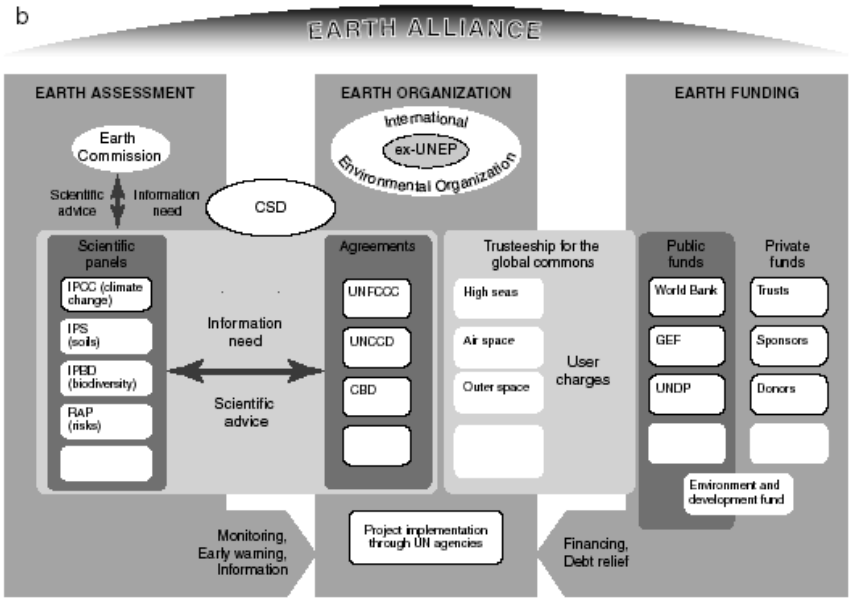
(fig.2: UN Millennium Project, 2005a: 28)

6. Reform of the International Environmental Governance Structure

6.1 Science Models and Controversies

One of the liveliest debates within international environmental governance is the debate about the institutional strengthening of the governance structure with the *UN Environment Programme* (UNEP) in the center. It is well known that the current status of UNEP hinders this UN Programme to serve as "the principal United Nations body in the field of the environment", as stated in the so called "Nairobi Declaration" of 1997.

A well known reform proposal was presented by the *German Advisory Council on Global Change* (WBGU) in 2000 building on several previous reform proposals. Its so called "Earth Alliance" consists of three pillars: Earth Assessment, Earth Organization, and Earth Funding. Even though this proposal is rather academic, it provides a good "blueprint", because it is dealing with this issue in a comprehensive manner and recommends a step-by-step approach for achieving the desired results.



(fig.3: WBGU, 2000)

Despite the general consensus for strengthening the institutional dimension of international environmental governance, the presented proposals vary widely. Some argue that the existing institutions are sufficient, but, given the necessary political will, have to be used in a much better way. From this perspective the highly fragmented and complex structures have their own advantage in that they are sensitive to specific problems – ranging from the very global level, e.g. for climate change, to very concrete areas of intervention, e.g. the protection of specific endangered species in various world regions – and in being able to deal with them in a flexible manner.[22] Proponents of extensive reform of the existing structures call for a UNEP featuring a

22 Such a perspective is often favoured by those who are dealing with environmental regimes from the theoretical background of new institutionalism. See the contributions of Thomas Gehring and Sebastian Oberthür, as well as of Adil Najam in Bauer and Biermann, 2005.

much broader mandate, a more legitimate basis – such as universal membership – and enhanced financial support (Biermann, 2005: 182). Far-reaching voices even claim that UNEP should be able to act as a counterpart to the WTO and the World Bank/IMF. While different steps of strengthening UNEP are proposed and do already exist, in the end the transformation of UNEP into a UN specialised agency, or in other words, into the UN Environment Organization (UNEO), is the most prominent position within this group.

This latter proposal is heavily criticized by its opponents. However, they often argue against positions which have never been raised and being trapped in meta-theoretical controversies which hardly match up with real world conditions. For instance, no one who is in favour of the creation of a specialised agency seriously wants to build up a highly centralised bureaucracy whose only surplus would be of symbolic nature, as many opponents gloomily predict. Interestingly, one outspoken opponent to a World Environment Organisation, Konrad von Moltke, suggested through his *clustering concept* a reform perspective that is very radical in many ways (von Moltke, 2002). With his focus on functional clusters aiming at regrouping multilateral agreements and single secretariats, such as the ones on the atmosphere or the marine environment, into a few activity centres, he cuts across well established organisational lines and proposes a position that is hardly likely to be implemented within the coming years. The same critique applies to Adil Najam, who opts for global governance and partnership based solutions (Najam, 2002). Of course, it is important to achieve a more society centred view of environmental governance for the 21st century under the academic auspices of global governance concepts. However, Najam's major concern – to save and revitalize the *Rio* compact between developed and developing countries on sustainable development and to avoid a fall-back into classical command and controll policies – is shared by the proponents of an institutional reform. They even argue that Najams concerns will be poorly considered without stronger institutions for environmental governance.

As a whole, one can distinguish five major types of proposals for *International Environmental Governance* (IEG) reform. For the sake of analytical clarity, it is useful to present them as follows (Brunnengräber, 2004):

1. '*Mainstreaming Approach*': To integrate ecological aspects and considerations into already existing and preferably powerful international organisations, e.g. "greening the WTO", is the main objective of this approach. Such an effort has been pushed by several NGOs and academics over the past years. Even though mainstreaming is seldom seen a the only solution, in the years since *Rio* a lot has been achieved regarding the mainstreaming of environmental issues in other fields and (UN) agencies such as the World Bank and others;

2. '*Global Governance Approach*': Stemming from the theoretical concept of "global governance", this approach highlights the rising importance of non-governmental actors as players in the field of global environmental governance. NGOs, transnational corporations, trade unions, and the epistemic community are the most prominent actors amongst them. As a result of this, a postmodern governance structure has to involve these actors more extensively, and will replace the common state-centric view by a more people oriented or society centred one. Proponents of this position are most sceptical about the creation of a World Environment Organisation;

3. '*Upgrading Approach*': The main objective of this approach is to strengthen UNEP as the already existing "global player" in the field of the environment. This position is based on a stepwise approach starting with broadening the financial, and personnel capacities of UNEP, and also, where appropriate, the mandate of the Programme. To reach higher compliance and enforcement power, UNEP's ability to provide firm political guidance has to be improved by raising the profile of environmental concerns to ministerial levels. Finally, the legitimacy needs

to be enhanced by moving towards universal membership, given that UNEP is currently headed by its Governing Council consisting of only 58 elected UN member states. In the last five years some progress has been made in each of the mentioned areas;

4. '*Specialized Agency Approach'*: This approach favours the creation of a World Environment Organisation as a specialised agency within the UN system, which would change the current status of UNEP – being only a UN Programme subordinated to the UN Economic and Social Council – into a specialised organisation of the UN family. Some supporters of the specialised agency approach even suggest establishing an all-encompassing organisation, swallowing existing agencies and autonomous regimes with their convention secretariats. Even more far-reaching postulations highlight that it is high time to fulfil the major policy shift established in *Rio* 1992 and integrate the institutional realm of environment and development under one super organisation for sustainable development (Simonis, 2005).[23]

5. The already mentioned '*Clustering Approach'*, aiming at regrouping multilateral agreements and single secretariats. Those considerations are already partly captured by the "Cartagena Package" under the theme "enhanced coordination across the United Nations system".[24]

In the past few years, the often primarily academic debate on the creation of World Environment Organisation has received more and more attention from policy makers and subsequently been incorporated into an intergovernmental process (Töpfer, 2005; Rechkemmer, 2005b; UNU/IAS, 2002; Schmidt, 2003; Subkus, 2004). The above mentioned report *In Larger Freedom: Towards Development, Security and Human Rights for All* by United Nations Secretary-General Kofi Annan and its identification of environmental governance as particularly relevant for the upcoming international system signals the current peak season of the political process. With these official documents – along with the three other discussed reports – the question of strengthening international environmental governance has been linked to the overall UN reform process and has gained, as a result, new and high level political momentum. These latest developments at the supranational level coincide with a political process led by a number of national governments, best represented by the Chirac initiative, focusing on a stronger UNEP and its eventual upgrading to a fully-fledged United Nations specialised agency. These parallel processes have created an interesting negotiation situation, and the upcoming months and years will be particularly important in this regard. Since it is not yet evident whether the efforts towards strengthening international environmental governance would benefit significantly from decisions taken within the UN reform process, it is advisable to present a stocktaking of the steps and measures that have already been taken, and to provide possible recommendations based on this analysis. Because UNEP is the key actor in the field of the environment within the United Nations system, it is at the core of these considerations.

6.2 Upgrading UNEP / Cartagena Package

In 1998 a task force on global environmental governance was established, led by Klaus Töpfer, the current Executive Director of UNEP. Far from being the "big break-through", this was a starting point for a new institutional reform process, galvanizing around the *World Summit on Sustainable Development* in Johannesburg in 2002. The task force's proposals, which were adopted by the UN General Assembly at its 53rd session (UNGA, 1999), brought about two major innovations, mainly dealing with coordination and harmonization of environmental and sustainable development matters within the UN as well as stronger political guidance and visibility:

---

23 It is worthwhile to mention that such a position is also often raised by those who oppose a solely strengthening of UNEP.

24 In this regard see also the discussions on "institutional interplay" in Young, 1999 and 2002.

- The establishment of the *Environmental Management Group* (EMG) to coordinate activities dealing with the environment within the UN; and
- The *Global Ministerial Environment Forum* (GMEF), a high level forum consisting of the Ministers of the Environment, widely recognised as successful.

The GMEF has been convening since 2000, held back-to-back with the UNEP Governing Council. It provides a good opportunity to make sure that the "voice of the environment" is being heard. Building up on these efforts, in February 2001 the open-ended *Intergovernmental Group of Ministers or their Representatives / International Environmental Governance* (IGM/IEG) was created and presented its proposals on the third GMEF in 2002 in Cartagena. The so-called *Cartagena Package* strengthened the political power of the GMEF and proposed the implementation of the already mentioned principle of universal membership of UNEP's *Governing Council* (GC) (UNEP/GC SS.VII/1). This step is highly contested, since opponents fear that this would be the first move towards a World Environment Organisation (UNEP 2004). Consequently, the UNEP Governing Council in February 2005 had to postpone the envisaged decision on this issue for another year to 2006, because no consensus has been reached so far. While the issue of strengthening the scientific basis of UNEP also lags behind the intended schedule, in December 2004 a very promising step was taken. The so-called *Bali-Strategic Plan for Technology Support and Capacity Building* was finalised and subsequently adopted at the Governing Council in February 2005. This was a major step forward to meet the provisions of the *Cartagena Package* and an important accommodation to the agenda of developing countries. Even though the financial situation of UNEP is still precarious, the voluntary indicative scale of contributions, initiated by Klaus Töpfer an another central area of reform, proved to be very good in the first years, and the budget for the biennium 2006/2007 is, with an amount of US$144 million, the largest ever.[25] Despite the fact that many have cirticized the slowly evolutionary, piecemeal approach of the *Cartagena Package,* it is the official road-map for the UNEP reform, confirmed at the *Johannesburg Summit* and its *Johannesburg Plan of Implementation* (JPoI) in 2002, the United Nations General Assembly Resolution 57/251 of December 2002, and now also from the wording of the "Outcome document" of the World Summit 2005 (RES A/60.L1, para 169). It is an important and official point of reference for political efforts.

6.3 The UNEO Intitative

In autumn 2003, France proposed the establishment of an informal working group to consider the transforming of UNEP into a UNEO (Gauer, 2005). The French proposal is based on four main guidelines: the preservation of the environment as a key issue for collective security; the degradation of the environment as a threat to development; the need for a multilateral response; and the important and privileged role of the United Nations in this respect. The working group following the principles of geographical balance and diversity of analysis on the issue was launched in February 2004 in New York. 26 countries initially accepted to take part, without specifying their positions on the creation of a UNEO. Between February 2004 and March 2005, the group met regularly to follow. A meeting on the issue at the level of Ministers of Foreign Affairs was held in New York in September 2004. Several meetings of Environment Ministers were held during international meetings and in particular in April 2005, within the framework of *Commission on Sustainable Development* 13 (CSD). The initial phase of the group's deliberations was devoted to an analysis of the various weaknesses and opportunities of the current system of *International Environmental Governance* (IEG). The second phase, in late 2004 and early 2005, was dedicated to an initial analysis of concrete options for addressing the weaknesses identified. Four main observations on gaps and weaknesses were identified:

25 On UNEP's history, performance and reform prospects see the excellent article of Ivanova, 2005.

- severe problems of coherence and efficiency;
- gaps in scientific expertise, early warning systems, and information;
- specific needs of developing countries not sufficiently taken into account;
- complexity of existing sources of financing.

The majority view of the group members and UNEO proponents alike is that the creation of a UNEO should be achieved by transforming UNEP – and not by establishing a new body parallel to UNEP. Such a process of transformation should be seen as an enhanced plan to implement the Cartagena recommendations. The UNEO headquarters should remain in Nairobi. The legal autonomy of the main conventions should be maintained. The UNEO would not have a mandate for standard setting similar to the WTO. In particular, a UNEO should result in:

- the strengthening of coherence and efficiency of the current international system, including the regional dimension;
- enhanced scientific expertise, information and early warning systems on environmental deterioration;
- responses to the specific needs of developing countries in order to ensure that the environment fully contributes to their sustainable development; and
- resolving financial aspects such as rationalizing efforts in order to mobilize additional resources to assist developing countries.

The working group considered giving more visibility and legitimacy to international efforts in the area of the environment, reducing the risks of loss of coherence and efficiency related to the number of fora and the dispersed nature of multilateral environmental agreements, contributing to capacity building in developing countries, so that they are in a better position to implement the *Millennium Ecosystem Assessment,* and strengthening scientific expertise in order to provide Member States with the best choices. Group members also elaborated the following proposals: institutional structure of a UNEO should ensure the legitimacy of decisions made by Member States, and it should give the organisation the capacity to fulfil its mandate. Transforming UNEP into a United Nations specialised agency should guarantee effective implementation. Based on existing models, the following institutional components could be proposed: an Assembly whose membership is universal; a Director-General elected by this Assembly; an executive board; a secretariat created out of UNEP's secretariat; and strengthened regional offices. After conclusion of the working group's deliberations, the initiative was referred to the diplomatic channels. Observers expect the group of UNEO supporters to further grow. France and other proponents will seek opportunities to broaden the basis for an intergovernmental initiative for the establishment of a UNEO by a two-thirds majority vote in the United Nations General Assembly. Independently from ongoing political discussions, efforts and proposals, this volume aims to cover a wide range of relevant issues, desiderata and goals to be discussed and analysed within the framework of IEG reform, UNEP upgrade and the UNEO initiative. The following crucial issues, inter alia, appear indispensable for the forthcoming talks:

- Implementation of the concept of IEG reform requires adherence to the following strategy: the *Cartagena Package* has to be adopted and implemented in the coming years – in addition the UNEO establishment process should be taken into consideration;
- The various needs and concerns of developing countries will have to constitute an important cornerstone of any future deliberations upon strengthening global environmental politics and institutional reform: in this context issues of financing and capacity strengthening are crucial: the *Rio* compact of sustainable development has to be maintained throughout; and

- Reformed and enhanced environmental governance at global level requires profound substance and capacity building as concerns its scientific and advisory base; the *Intergovernmental Panel on Climate Change* (IPCC) may serve as a blueprint when designing an advisory body (Vlek, 2005) as part of an UNEO architecture (Ecologic, 2005).

At the recently concluded "World Summit 2005" and in its outcome document these areas of interests were confirmed again, and there is a certain amount of evidence that by the 61st General Assembly a breakthrough in major areas is possible. In the time ahead of us the base of like-minded states in favour of a UNEP-upgrade or even a UNEO has to be broadened, and the overall UN reform, especially its *Economic and Social Council* (ECOSOC), including its *Commission on Sustainable Development* (CSD), has to be taken into consideration (Schulz-Baldes and Kempmann, 2005). The rather strong wording of the above mentioned outcome document is a very good starting point for concrete negotiations.

7. Conclusions/Outlook

In designing any future international arrangements on environmental issues, it is important to take into account the contemporary political realities at the global level. A lot of governments' political attention is nowadays directed foremost to societal concerns such as economic, social and human development, poverty reduction, health, water and sanitation, food security, national security and statehood protection. In a number of countries, reduced political status, reduced budgets as well as reduced *Official Development Aid* (ODA) have hampered progress in the environmental management field. To ensure significant political support for any future objectives, it is thus a prerequisite to explicitly include the crucial issues of enhanced and sustainable management of complex ecosystems and natural resources into the societal agenda of developing countries and actual as well as potential donors.[26]

The majority of background and discussion papers elaborated by developed countries tend to propose the following strategic objectives with regards to the global environmental agenda: (a) enhance the conservation of natural resources to ensure long-term benefits for people that depend on them; (b) secure high-level political support to mobilise financial and technical resources; (c) reduce degradation of natural resources and restore degraded areas to a productive state; and, (d) establish partnerships with constituencies external to natural resources to proof contributions of natural resources to the societal agenda of states (Maini, 2004). Notwithstanding the evident importance of these objectives, such exclusive approaches may not lead to an effectively reshaped and impact-driven new policy for global environmental management. More holistic requirements seem to be needed: the global targets of nature conservation, sustainable resource management, production and trade firstly have to be addressed in a balanced and integrated manner – harmonizing needs and objectives of recipients and donors, producers and consumers alike. Secondly, holism vis-à-vis the environmental agenda means deepening the link between global environmental change and the agenda of human security.

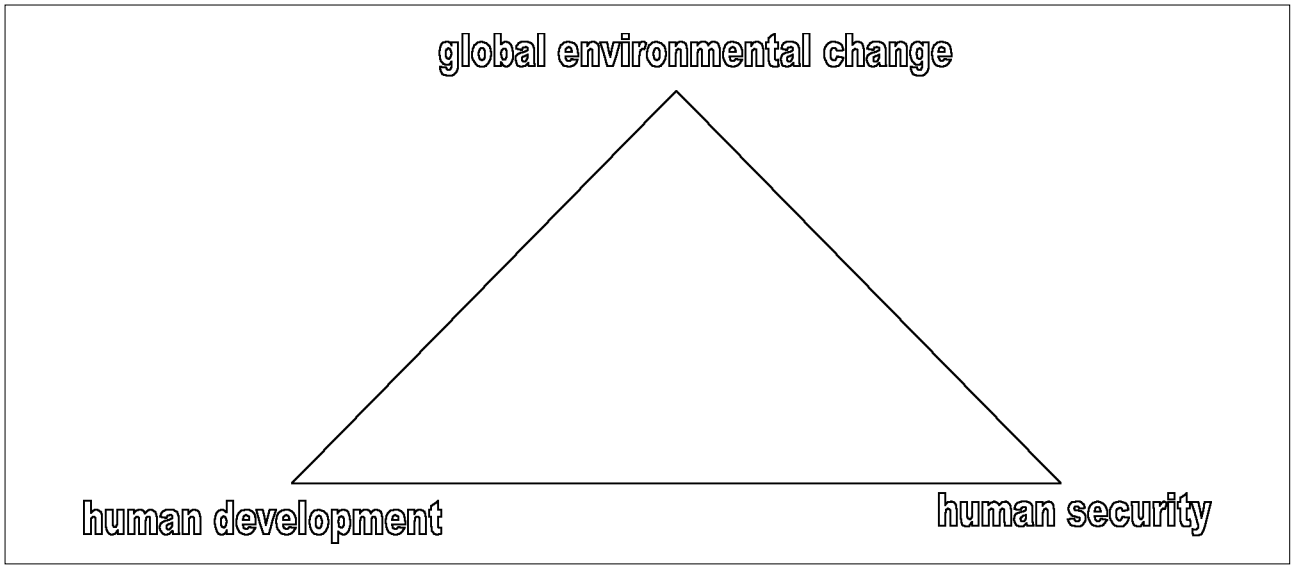
Sustainable development is about improving the quality of life for all of the Earth's citizens without increasing the use of natural resources and sinks beyond the capacity of the environment to supply them indefinitely. It underlies an understanding that action has consequences and that humanity must find innovative ways to change institutional structures and influence individual behaviour. It is about taking action, changing policy and practice at all levels, from the individual to the general or collective. The Brundtland definition also implies a very important shift from an idea of sustainability, as primarily ecological, to a framework that also emphasizes the economic and social context of development. In this regard, since the *United Nations Conference on Environment and Development* (UNCED), more responsibilities have been placed on states and civil society to protect local, national, sub regional, regional, and global environment, especially those which are the concern of entire communities such as climate change, loss of biodiversity, land degradation, desertification and deforestation. In other words, there was conceptualisation of a need for more effective implementation of conventions on environment and development, through integration with domestic law and policy. A number of examples clearly point out the human concerns and need for meaningful incentives for communities and individuals to achieve sustainable development.

It is commonly recognised that global environmental threats such as climate change and global warming are to a great extent produced in developed countries, and are thus part of the epiphenomena of globalisation, but have significant and often disastrous impact on developing countries. Loss of biodiversity, deforestation and desertification are among the most promi-

26 It is the overarching idea of the *International Human Dimensions Programm on Global Environmental Change* (IHDP) to foster and facilitate research on coupled sozial-ecological systems. See http://www.ihdp.org.

nent ones, since rainfall patterns change significantly in arid, semiarid and dry sub humid areas. But this is not yet the end of the story. Desertification, for example, itself is a driving force for further downstream problems of severe magnitude, such as marginalisation of rural areas, economic disaster and poverty, migration, urbanisation, and social conflict, just to name some. There is, as has been mentioned above, a clear link between environmental issues, economic development, and more particular, human security. It was of utmost importance already at UNCED to understand what are the linkages, underlying forces, causes and effects or, in other words, to find an answer to the question: how can sustainable development and human security be obtained in the age of globalisation? How can the structures, trends and effects of a globalising world, be utilised to serve the needs of those affected by natural/environmental and socio-economic disaster?

Analysis of the four reports examined in chapter 5 provides the insight that a new paradigm shift for environmental governance is likely to be taking place – in analogy to the one initiated by the *Brundtland Report* leading to UNCED and its outcomes as well as to the conception of sustainable development. Matters related to global environmental change should no longer be treated as a stand-alone, perceiving nature conservation as a good for itself, nor should environmental care be perceived as depending on a certain given state of domestic economic development. The Brundtland nexus between environment and development, which implies mutual interdependence, should not be given up. Moreover, the factor of human security should be systematically added to the matrix of sustainable development, bringing about a triangular understanding of the inter-relatedness of environmental change, development, and human security.



Without any doubt, the human dimension of global environmental change has meanwhile more than ever before entered the focus of science and policy-makers alike. The link between global environmental change and human security has nowadays become part of the portfolio of a number of departments and agencies of the United Nations system. In some cases, it constitutes a major, in others, a minor target area. There is evidence that the level of attention towards the working field / issue area in question has gained, yet is of a growing nature.

The year 2005 has brought momentum into two important reform projects: the one that foresees the strengthening of the institutional architecture of global environmental governance through a step-wise upgrading process of UNEP or even the establishment of a *UN Environment Organization* (UNEO); and the one on reforming the overall UN system. Various political initiatives and processes, be they multilateral, nation-state based or initiated by the UN Secretary-

General, are underway, and a number of scientific proposals have been tabled. However; while the concept of *Human Security* is perceived as a driver for overall UN reform – through a more holistic and interrelated understanding of the nature of threats and challenges to the international community in the future, thus shaping a new task portfolio for the United Nations –, it does not yet appear to have been fully integrated in the organisational as well as task related outfits of those UN agencies and bodies responsible for environmental concerns. Moreover, most of the reform agendas the United Nations are pursuing as a whole appear somewhat biased towards societal concerns while the environmental factor, although mentioned, is not fully recognised in its challenging dimension.

For both reform processes, mutually raised awareness appears to be a necessity. The environmental dimension of human security could still gain higher profile and awareness in those proposals and strategies aiming to reform and strengthen the United Nations system, e.g. *the High-Level Panel Report,* the Secretary-General's report of 21 March 2005, and the *Sachs Report.* On the other side, the aspect of human security appears to redeem more attention at the level of UN agencies in charge of global environment. Both ongoing reform processes, UNEP upgrade and UNEO initiative, could benefit from a stronger adherence to the cross-sectoral field of *environment and human security.* For ongoing implementation and/or negotiation processes of environmental agreements or programmes, the factor of human security should thus be underlined more so as to overcome the current gridlock in this context. For instance, the debate about upgrading UNEP and the UNEO initiative could gain further support and advocacy, also from developing countries, if their raison d'être would be derived more strongly from the nexus between environment and human security (Bogardi and Brauch, 2005). The same logic may apply to existing multilateral agreements such as the *Rio* conventions. These could gain new momentum through a more holistic understanding as exposed by the triangle above.

The field of *environment and human security* thus has the potential to constitute the conceptual bridge between the two described processes, i.e. global environmental governance and UN reform. It appears to be a precondition that the mutual interdependence and causality between the three components described above – global environmental change, human development, human security – be further and deeper explored by scientists and policy makers. Through such holistic views, the here-to-fore parallel reform processes could experience integration, rendering the striving for more effective institutions responsible for the global environment as part and parcel of the efforts of the United Nations to build up a stronger system ready to effectively address the challenges of the 21st century.

Annex

List of Important Multilateral Agreements (MEAs)

Subject	Year of entry	Remarks
Kyoto Protocol to the United Nations Framework Convention on Climate Change: The 1997 Kyoto Protocol shares the objective, principles and institutions of the Convention on Climate Change, but significantly strengthens the Convention by committing Annex I Parties to individual, legally-binding targets to limit or reduce their greenhouse gas emissions	2005	It entered into force in February 2005- the ninetieth day after at least 55 Parties to the Convention, incorporating Annex I Parties which accounted in total for at least 55 percent of the total carbon dioxide emissions for 1990 from that group, deposited their instruments of ratification, acceptance, approval or accession. The first session of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol will take place in November/December 2005 in Montréal/ Canada.
Stockholm Convention on Persistent Organic Pollutants: Protection of human health and the environment from persistent organic pollutants (POPs), which are chemicals that remain intact in the environment for long periods, become widely disturbed geographically and are toxic to humans and wildlife. The Convention will take measures to eliminate or reduce the release of POPs.	2001	First meetings of the various subcommittees will take place in November 2005 in Geneva: – First meeting of the Expert Group on Best Available Technologies and Best Environmental Practices; – First meeting of the Persistent Organic Pollutants Review Committee
Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal (supplementary agreement to the Convention on Biological Diversity): The aim of the Protocol is to contribute to ensuring an adequate level of protection in the field of the safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity	2000	Upcoming meetings are: – in January 2006 in Norway: the Coordination meeting on biosafety capacity building initiatives – in March 2006: Third Meeting of the conference of the Parties serving as the meeting of the Parties to the Cartagena Protocol

Subject	Year of entry	Remarks
Basel Protocol on Liability and Compensation for Damage resulting from Transboundary Movements of Hazardous Wastes and Their Disposal: The objective of the Protocol is to provide for a comprehensive regime for liability as well as adequate and prompt compensation for damage resulting from the transboundary movement of hazardous wastes and other wastes, including incidents occurring due to illegal traffic in those wastes.	1999	The Protocol has a total number of 166 Parties. Three Signatories of the Convention, which have not yet ratified are: Afghanistan, Haiti, and the United States
Protocol to the 1979 Convention on the Long-Range Transboundary Air Pollution on Persistent Organic Pollutants (POPs), Aarhus: The Protocol targets three particularly harmful metals: cadmium, lead and mercury. A basic obligation to the Parties is to reduce the emissions for these three metals below their levels in 1990. It aims to cut emissions from industrial sources (iron and steel industry, non-ferrous metal industry), combustion processes (power generation, road transport) and waste incineration. It lays down stringent limit values for emissions from stationary sources and suggests best available techniques for these sources, and requires Parties to phase out leaded petrol.	1998	The Convention on Long-range Transboundary Air Pollution entered into force in 1983. It has been extended by eight specific protocols.
Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade: It promots shared responsibility and cooperative efforts among Parties in the international trade of certain hazardous chemicals, in order to protect human health and the environment from potential harm and to contribute to their environmentally sound use by facilitating information exchange about their characteristics, providing for a national decision-making process on their import and export and disseminating these decisions to Parties.	1998	The Convention established a Secretariat, whose functions are to be performed jointly by UNEP and FAO. The first meeting of the Conference of the Parties was convened in September 2004. The Second Meeting of the Conference of the Parties will be held in Rome in September 2005.

Subject	Year of entry	Remarks
Convention on Supplementary Compensation for Nuclear Damage, Vienna and the Protocol to Amend the 1963 Vienna Convention on Civil Liability for Nuclear Damage The Convention defines additional amounts to be provided through contributions by States Parties on the basis of installed nuclear capacity and UN rate of assessment. The Convention is an instrument to which all States may adhere regardless of whether they are parties to any existing nuclear liability conventions or have nuclear installations on their territories. The Protocol contains inter alia a better definition of nuclear damage (now also addressing the concept of environmental damage and preventive measures), extends the geographical scope of the Vienna Convention, and extends the period during which claims may be brought for loss of life and personal injury. It also provides for jurisdiction of coastal states over actions incurring nuclear damage during transport.	1997	Taken together, the two instruments should substantially enhance the global framework for compensation well beyond that foreseen by existing Conventions.
Protocol of 1997 to amend the International Convention for the Prevention of Pollution from Ships, London: The protocol contains regulations to prevent and control harmful air emissions from vessels through set standards on the emissions from diesel engines, the release of volatile organic compounds from cargoes carried in tankers and the use of ozone depleting substances. It also specifies requirements for type, approval and operation of shipboard incinerators.	1997	
International Tropical Timber Agreement, Geneva: The objectives of the Agreement are to promote sustainable forestry and trade practices for tropical timber. The Agreement also looks to promote and support research and development for the improvement those practices.	1997	

Subject	Year of entry	Remarks
International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, London : To ensure that adequate, prompt, and effective compensation is available to persons who suffer damage caused by incidents in connection with the carriage by sea of hazardous and noxious substances	1996	
Comprehensive Nuclear-Test-Ban Treaty, New York: The Comprehensive Nuclear-Test-Ban Treaty bans all nuclear explosions.	(1996)	Entry into Force • The CTBT will enter into force 180 days after it has been ratified by the 44 States listed in its Annex 2. • These 44 States all formally participated in the 1996 session of the Conference on Disarmament, and possess either nuclear power or research reactors. States which have not yet ratified the Treaty are China, USA, etc...

UNEP's Chronological List of MEAs (1933–2005)

Year	Title of Agreement
2005	Kyoto Protocol, UNFCCC
2003	Protocol on Strategic Environmental Assessment (SEA), Kiev
2003	European Convention for the Protection of Animals During International Transport (Not in force yet)
2002	The Convention for Cooperation in the Protection and Sustainable Development of the Marine and Coastal Environment of the Northeast Pacific (Antigua Convention)
2002	ASEAN Agreement on Transboundary Haze Pollution (Entered into force November 2003)
2001	Convention on the Conservation and Management of Fishery Resources in the South-East Atlantic Ocean, Windhoek
2001	Stockholm Convention on Persistent Organic Pollutants, Stockholm
2001	International Treaty on Plant Genetic Resources for Food and Agriculture, Rome
2001	Convention on the Protection of the Underwater Cultural Heritage, Paris
2000	Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Montreal
2000	European Agreement Concerning the International Carriage of Dangerous Goods by Inland Waters, Geneva
2000	Revised Protocol on Shared Watercourses of the Southern African Development Community, Windoek
2000	Framework Agreement for the Conservation of Living Marine Resources on the High Seas of the South Pacific (The Galapagos Agreement), Santiago
2000	Convention on the Conservation and Management of Highly Migratory Fish Stocks in the Western and Central Pacific Ocean, Honolulu
2000	European Landscape Convention, Florence
1999	Protocol on Water and Health to the 1992 Convention on the Protection and Use of Transboundary Watercourses and International Lakes, London
1999	Protocol on Wildlife Conservation and Law Enforcement of the Southern African Development Community, Maputo
1999	Protocol Concerning Pollution from Land-Based Sources and Activities to the 1983 Convention for the Protection and Development of the Marine Environment of the Wider Caribbean, Oranjestad (Aruba)
1999	Agreement for the Establishment of the Regional Commission for Fisheries, Rome
1999	Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution to Abate Acidification, Eutrophication and Ground Level Ozone, Gothenburg (Not yet in force)
1999	[Beijing] Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Beijing
1999	Basel Protocol on Liability and Compensation for Damage resulting from Trans-boundary Movements of Hazardous Wastes and Their Disposal, Basel

Year	Title of Agreement
1998	Protocol on the Control of Marine Transboundary Movements and Disposal of Hazardous Wastes and Other Wastes, Tehran
1998	Protocol of Amendment to the European Convention for the Protection of Vertebrate Animals Used for Experimental and Other Scientific Purposes, Strasbourg (Not yet in force)
1998	Protocol to the 1979 Convention on the Long-Range Transboundary Air Pollution on Persistent Organic Pollutants (POPs), Aarhus
1998	Protocol to the 1979 Convention on the Long-Range Transboundary Air Pollution on Heavy Metals, Aarhus
1998	Convention on Access to Information, Public Participation in Decision-Making and Access to Justice in Environmental Matter, Aarhus
1998	Rotterdam Convention on the Prior Informed Consent Procedure for Certain Hazardous Chemicals and Pesticides in International Trade, Rotterdam
1998	Convention on the Protection of the Environment through Criminal Law, Strasbourg (Not yet in force)
1997	Convention on the Law of Non-Navigational Uses of International Watercourses, New York
1997	Joint Convention on the Safety of Spent Fuel Management and on the Safety of Radioactive Wastes Management, Vienna
1997	Convention on Supplementary Compensation for Nuclear Damage, Vienna
1997	Protocol to Amend the Vienna Convention on Civil Liability for Nuclear Damage, Vienna
1997	Montreal Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal
1997	Protocol of 1997 to Amend the International Convention for the Prevention of Pollution from Ships, 1973, as amended by the Protocol of 1978 relating thereto, London
1997	Kyoto Protocol to the United Nations Framework Convention on Climate Change, Kyoto
1996	Treaty on the Nuclear-Weapon-Free-Zone in Africa (Pelindaba Treaty), Cairo. Including Protocols I, II, & III.
1996	International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, London
1996	Comprehensive Nuclear-Test-Ban Treaty, New York
1996	Protocol on the Prevention of Pollution of the Mediterranean Sea by Transboundary Movements of Hazardous Wastes and Their Disposal, Izmir
1996	Protocol to the Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter, 1972, London
1996	Agreement on the Conservation of Cetaceans of the Black Sea, Mediterranean Sea and Contiguous Atlantic Area, Monaco (ACCOBAMS)
1995	Agreement on the Cooperation for the Sustainable Development of the Mekong River Basin, Chiang Rai

Year	Title of Agreement
1995	Protocol Concerning Specially Protected Areas and Biological Diversity in the Mediterranean, Barcelona
1995	Agreement on the Conservation of African-Eurasian Migratory Waterbirds, The Hague (AEWA)
1995	Convention Concerning Safety and Health in Mines, Geneva
1995	Agreement for the Implementation of the Provisions of the United Nations Convention on the Law of the Sea of 10 December 1982 relating to the Conservation and Management of Straddling Fish Stocks and Highly Migratory Fish Stocks, New York
1995	Protocol on Shared Watercourse Systems of the Southern African Development Community, Johannesburg (SADC)
1995	Convention to Ban the Importation into Forum Island Countries of Hazardous and Radioactive Wastes and to Control the Transboundary Movement and Management of Hazardous Wastes within the South Pacific Region (The Waigani Convention), Waigani
1995	Amendment to the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal, Geneva
1995	Treaty on the Southeast Asia Nuclear Weapon-Free Zone (Bangkok Treaty), Bangkok; Including the Protocol to the treaty.
1994	International Tropical Timber Agreement, 1994, Geneva
1994	Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution on Further Reduction of Sulphur Emissions, Oslo
1994	Convention on the Conservation and Management of Pollock Resources in the Central Bering Sea, Washington, D.C.
1994	United Nations Convention to Combat Desertification in Those Countries Experiencing Serious Drought and/or Desertification, Particularly in Africa, Paris
1994	Convention on Cooperation for the Protection and Sustainable Use of the Danube River, Sofia
1994	Convention for the Establishment of the Lake Victoria Fisheries Organization, Kisumu, Kenya
1994	Agreement relating to the Implementation of Part XI of the United Nations Convention on the Law of the Sea of 10 December 1982, New York
1994	Lusaka Agreement on Co-Operative Enforcement Operations Directed at Illegal Trade in Wild Fauna and Flora, Lusaka
1994	Convention on Nuclear Safety, Vienna
1994	Protocol for the Protection of the Mediterranean Sea against Pollution resulting from Exploration and Exploitation of the Continental Shelf and the Seabed and its Subsoil, Madrid
1994	Energy Charter Treaty, Lisbon
1994	Energy Charter Protocol on Energy Efficiency and related Environmental Aspects, Lisbon

Year	Title of Agreement
1993	Convention on the Prohibition of the Development, Production, Stockpiling and Use of Chemical Weapons and on Their Destruction, Paris
1993	Agreement for the Establishment of the Near East Plant Protection Organization, Rabat
1993	Convention for the Conservation of Southern Bluefin Tuna, Canberra
1993	Convention on Civil Liability for Damage Resulting from Activities Dangerous to the Environment, Lugano (Not yet in force)
1993	Convention Concerning the Prevention of Major Industrial Accidents, Geneva
1993	North American Agreement on Environmental Cooperation, Mexico City, Ottawa and Washington, D.C.
1993	Regional Convention for the Management and Conservation of the Natural Forest Ecosystems and the Development of Forest Plantations, Guatemala City
1993	Agreement for the Establishment of the Indian Ocean Tuna Commission, Rome
1993	Agreement to Promote Compliance with International Conservation and Management Measures by Fishing Vessels on the High Seas, Rome
1992	Protocol of Amendment to the European Convention for the Protection of Animals Kept for Farming Purposes, Strasbourg (Not yet in force)
1992	Convention for the Conservation of Anadromous Stocks in the North Pacific Ocean, Moscow
1992	Convention on the Transboundary Effects of Industrial Accidents, Helsinki
1992	Convention on the Protection and Use of Transboundary Watercourses and International Lakes, Helsinki
1992	Agreement on the Conservation of Small Cetaceans of the Baltic and North Seas, New York (ASCOBANS)
1992	Convention on the Protection of the Marine Environment of the Baltic Sea Area, 1992, Helsinki
1992	Convention on the Protection of the Black Sea against Pollution, Bucharest
1992	Protocol on Protection of the Black Sea Marine Environment against Pollution from Land-Based Sources, Bucharest
1992	Protocol on Cooperation in Combating Pollution of the Black Sea Marine Environment by Oil and Other Harmful Substances in Emergency Situations, Bucharest
1992	Protocol on the Protection of the Black Sea Marine Environment against Pollution by Dumping, Bucharest
1992	United Nations Framework Convention on Climate Change, New York
1992	Convention on Biological Diversity, Rio De Janeiro
1992	Convention for the Protection of the Marine Environment of the North-East Atlantic, Paris (OSPAR)
1992	[Copenhagen] Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Copenhagen

Year	Title of Agreement
1992	Protocol of 1992 to Amend the International Convention on Civil Liability for Oil Pollution Damage, 1969, London
1992	Protocol of 1992 to Amend the International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage, 1971, London
1992	European Convention for the Protection of the Archaeological Heritage of Europe
1991	Bamako Convention on the Ban of the Import into Africa and the Control of Transboundary Movement and Management of Hazardous Wastes within Africa, Bamako
1991	Convention on Environmental Impact Assessment in a Transboundary Context, Espoo (Note: Kiev Protoccol, 2003)
1991	Western Indian Ocean Tuna Organization Convention, Mahe
1991	Protocol to the Antarctic Treaty on Environmental Protection, Madrid
1991	Convention Concerning the Protection of the Alps, Salzburg
1991	Protocol to the 1979 Convention on Long-Range Transboundary Air Pollution Concerning the Control of Emissions of Volatile Organic Compounds or Their Transboundary Fluxes, Geneva
1991	Agreement on the Conservation of Bats in Europe, London
1990	Adjustment to the Montreal Protocol on Substances that Deplete the Ozone Layer (1987), London (as amended 1990, 1992)
1990	Protocol Concerning Specially Protected Areas and Wildlife to the Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Kingston
1990	Protocol for the Protection of the Marine Environment Against Pollution from Land-Based Sources, Kuwait
1990	Convention Concerning Safety in the Use of Chemicals at Work, Geneva
1990	Agreement on the Conservation of Seals in the Wadden Sea, Bonn
1990	International Convention on Oil Pollution Preparedness, Response and Cooperation, London
1990	Protocol of Termination of the Convention on the Conservation of the Living Resiurces of the Southeast Atlantic Signed at Rome on the 23rd of October 1969
1989	Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and their Disposal, Basel
1989	Protocol Concerning Marine Pollution Resulting from Exploration and Exploitation of the Continental Shelf, Kuwait
1989	International Convention on Salvage, London
1989	Protocol for the Conservation and Management Of Protected Marine and Coastal Areas of the South-East Pacific, Paipa
1989	Protocol for the Protection of the South-East Pacific Against Radioactive Contamination, Paipa
1989	Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods By Road, Rail and Inland Navigation Vessels, Geneva

Year	Title of Agreement
1989	Convention for the Prohibition of Fishing With Long Drift Nets In the South Pacific, Wellington
1988	Protocol to the 1979 Convention on Long-range Transboundary Air Pollution Concerning the Control of Emissions of Nitrogen Oxides or their Transboundary Fluxes, Sofia
1988	Agreement on the Network of Aquaculture Centres in Asia and the Pacific, Bangkok
1988	Convention on the Regulation of Antarctic Mineral Resource Activities, Wellington
1988	Convention Concerning Safety and Health in Construction, Geneva (ILO Convention No. 167)
1988	Joint Protocol Relating to the Application of the Vienna Convention and the Paris Convention, Vienna
1987	Montreal Protocol on Substances that Deplete the Ozone Layer, Montreal
1987	Agreement on the Action Plan for the Environmentally Sound Management of the Common Zambezi River System, Harare (ZACPLAN)
1987	European Convention for the Protection of Pet Animals, Strasbourg
1986	Convention Concerning Safety in the Use of Asbestos, Geneva (ILO Convention No 162, Asbestos Convention)
1986	Convention on Early Notification of a Nuclear Accident Vienna
1986	Convention on Assistance in the Case of a Nuclear Accident or Radiological Emergency, Vienna
1986	Convention for the Protection of the Natural Resources and Environment of the South Pacific Region, Noumea
1986	Protocol for the Prevention of Pollution of the South Pacific Region by Dumping, Noumea
1986	Protocol Concerning Co-operation in Combating Pollution Emergencies in the South Pacific Region, Noumea
1985	Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on the Reduction of Sulphur Emissions or their Transboundary Fluxes by at least 30 per cent, Helsinki
1985	Vienna Convention for the Protection of the Ozone Layer, Vienna
1985	Convention for the Protection Management and Development of the Marine and Coastal Environment of the Eastern African Region, Nairobi
1985	Protocol Concerning Protected Areas and Wild Fauna and Flora in the Eastern African Region, Nairobi
1985	Protocol Concerning Co-operation in Combating Marine Pollution in Cases of Emergency in the Eastern African Region, Nairobi
1985	Convention Concerning Occupational Health Services, Geneva (ILO Convention No 161)
1985	ASEAN Agreement on the Conservation of Nature and Natural Resources, Kuala Lumpur

Year	Title of Agreement
1985	South Pacific Nuclear Free Zone Treaty, Rarotonga
1984	Protocol to the 1979 Convention on Long-range Transboundary Air Pollution on Long-term Financing of the Co-operative Programme for Monitoring and Evaluation of the Long-range Transmission of Air Pollutants in Europe (EMEP), Geneva
1983	Supplementary Protocol to the Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons or Other Harmful Substances, Quito
1983	Protocol for the Protection of the South-East Pacific Against Pollution from Land-based Sources, Quito
1983	Convention for the Protection and Development of the Marine Environment of the Wider Caribbean Region, Cartagena de Indias
1983	Protocol Concerning Co-operation in Combating Oil Spills in the Wider Caribbean Region, Cartagena de Indias
1983	Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil and Other Harmful Substances, Bonn
1983	International Tropical Timber Agreement, Geneva
1982	Regional Convention for the Conservation of the Red Sea and Gulf of Aden Environment, Jeddah (includes 1982 Protocol)
1982	Protocol Concerning Regional Co-operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency, Jeddah (includes 1982 Protocol)
1982	Protocol Concerning Mediterranean Specially Protected Areas, Geneva
1982	Convention for the Conservation of Salmon in the North Atlantic Ocean, Reykjavik
1982	Benelux Convention on Nature Conservation and Landscape Protection, Brussels
1982	United Nations Convention on the Law of the Sea, Montego Bay
1981	Convention for Co-operation in the Protection and Development of the Marine and Coastal Environment of the West and Central African Region, Abidjan (includes 1981 Protocol)
1981	Protocol Concerning Co-operation in Combating Pollution in Cases of Emergency, Abidjan
1981	Convention Concerning Occupational Safety and Health and the Working Environment, Geneva (ILO Convention No. 155)
1981	Convention for the Protection of the Marine Environment and Coastal Area of the South-East Pacific, Lima
1981	Agreement on Regional Co-operation in Combating Pollution of the South-East Pacific by Hydrocarbons or Other Harmful Substances in Cases of Emergency, Lima
1980	Convention on the Physical Protection of Nuclear Material, Vienna and New York
1980	Protocol for the Protection of the Mediterranean Sea Against Pollution from Land-Based Sources, Athens
1980	Convention on the Conservation of Antarctic Marine Living Resources, Canberra (includes Original 1976 Agreement with 1976 Protocols and 1980 & 1982 Protocols)

Year	Title of Agreement
1980	European Outline Convention on Transfrontier Co-operation between Territorial Communities or Authorities. Madrid (see 1995 Protocol)
1980	Convention Creating the Niger Basin Authority & Protocol Relating to the Development Fund of the Niger Basin, Faranah (Convention supersedes the agreement signed in Niamey in November 1964 as amended in Niamey in February 1968 and June 1973 and in Lagos in January 1979.)
1980	Convention on Future Multilateral Co-operation in North-East Atlantic Fisheries, London
1979	Convention on the Conservation of Migratory Species of Wild Animals
1979	Convention on the Conservation of European Wildlife and Natural Habitats (Bern Convention)
1979	Convention on Long-Range Transboundary Air Pollution
1979	European Convention for the Protection of Animals for Slaughter, Strasbourg
1979	Convention for the Conservation and Management of the Vicuna, Lima
1978	Kuwait Regional Convention for Co-operation on the Protection of the Marine Environment from Pollution
1978	Treaty for Amazonian Co-operation
1978	Protocol Amending the International Convention for the High Seas Fisheries of the North Pacific Ocean
1978	Protection of New Varieties of Plants (Revision of 1961 Agreement)
1978	Convention on Future Multilateral Cooperation in the Northwest Atlantic Fisheries, Ottawa
1978	Protocol Concerning Regional Co-Operation in Combating Pollution by Oil and Other Harmful Substances in Cases of Emergency
1977	Convention on the Prohibition of Military or Any Other Hostile Use of Environmental Modification Techniques
1977	Convention Concerning the Protection of Workers against Occupational Hazards in the Working Environment Due to Air pollution, Noise and Vibration (ILO Convention No 148)
1976	Convention for the Protection of the Mediterranean Sea against Pollution (includes 2-1976 Protcols and 1980 & 1982 Protocols)
1976	Convention on Conservation of North Pacific Fur Seals (includes links to 1980 & 1984 Protocols)
1976	Convention on the Protection of the Archaeological, Historical and Artistic Heritage of the American Nations
1976	Convention on Conservation of Nature in the South Pacific 2000 Amendments (Not yet in force)
1976	Convention for the Protection of the Rhine against Chemical Pollution
1976	European Convention for the Protection of Animals Kept for Farming Purposes, Strasbourg 1992 Protcol (Not yet in force)

Year	Title of Agreement
1976	Agreement Concerning the Protection of the Waters of the Mediterranean Shores; Monaco
1976	Convention on the Protection of the Rhine Against Pollution by Chlorides, Bonn
1974	The Nordic Environmental Protection Convention
1974	Convention on the Protection of the Marine Environment of the Baltic Sea Area Replaced by 1992 Helsinki Convention
1974	Convention for the Prevention of Marine Pollution from Land-Based Sources, Paris (Revised by 1992 OSPAR Convention)
1974	Agreement on an International Energy Program
1973	Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
1973	Convention on Fishing and Conservation of the Living Resources in the Baltic Sea and the Belts
1973	International Convention for the Prevention of Pollution from Ships, 1973 and Protocols (MARPOL 73/78) (See also 1996 Amendments and 1997 Protocol)
1973	Protocol Relating to Intervention on the High Seas in Cases of Marine Pollution by Substances Other than Oil
1973	Agreement on Conservation of Polar Bears
1972	Convention on the Prevention of Marine Pollution by Dumping from Ships and Aircraft (The Oslo Convention, Revised by the 1992 OSPAR Convention)
1972	Convention on the Prohibition of the Development, Production and Stockpiling of Bacteriological (Biological) and Toxin Weapons, and on their Destruction
1972	Convention for the Conservation of Antarctic Seals
1972	Convention for the Protection of the World Cultural and Natural Heritage
1972	Convention on the Prevention of Marine Pollution by Dumping of Wastes and Other Matter (London Convention, See also 1996 Protocol)
1971	Convention on Wetlands of International Importance especially as Waterfowl Habitat (Ramsar)
1971	Treaty on the Prohibition of the Emplacement of Nuclear Weapons and other Weapons of Mass Destruction on the Sea-Bed and the Ocean Floor and in the Subsoil Thereof
1971	Convention Concerning Protection against Hazards of Poisoning Arising from Benzene
1971	Convention Relating to Civil Liability in the Field of Maritime Carriage of Nuclear Material
1971	International Convention on the Establishment of an International Fund for Compensation for Oil Pollution Damage
1970	Benelux Convention Concerning Hunting and the Protection of Birds
1970	Agreement for the Establishment of a Commission for Controlling the Desert Locust in Northwest Africa

Year	Title of Agreement
1969	European Convention on the Protection of the Archaeological Heritage (Note: this agreement has been replaced by 1992 revised agreement.)
1969	Agreement for Co-operation in Dealing with Pollution of the North Sea by Oil (replaced by the 1983 Bonn Agreement, no longer in force)
1969	Convention on the Conservation of the Living Resources of the Southeast Atlantic (Terminated by 1990 Protocol)
1969	International Convention Relating to Intervention on the High Seas in Cases of Oil Pollution Casualties
1969	International Convention on civil Liability for Oil Pollution Damage (See also 1976 and 1992 Protocols)
1968	African Convention on the Conservation of Nature and Natural Resources (Revisions adopted in 2003 subject to ratification by 15 African states)
1968	European Agreement on the Restriction of the Use of Certain Detergents in Washing and Cleaning Products
1968	European Convention for the Protection of Animals during International Transport
1966	International Convention for the Conservation of Atlantic Tunas
1965	Agreement for the Establishment of a Commission for controlling the Desert Locust in the Near East
1964	Convention for the International Council for the Exploration of the Sea
1964	Agreement concerning the Niger River Commission and the Navigation and Transport on the River Niger (Superceded by 1980 Convention creating Niger River Authority)
1963	Agreement Concerning the International Commission for the Protection of the Rhine against Pollution
1963	Vienna Convention on Civil Liability for Nuclear Damage
1963	Treaty Banning Nuclear Weapon Tests in the Atmosphere, in Outer Space and Under Water
1963	Act Regarding Navigation and Economic Co-operation between the States of the Niger Basin
1963	Agreement for the Establishment of a Commission for Controlling the Desert Locust in the Eastern Region of its Distribution Area in South/West Asia
1962	Convention of the African Migratory Locust Organization
1962	Agreement Concerning Co-operation in Marine Fishing
1961	Protocol concerning the constitution of an International commission for the Protection of the Mosel against Pollution
1961	International Convention on the Protection of New Varieties of Plants
1960	Convention Concerning the Protection of Workers against Ionising Radiations
1960	Convention on Third Party Liability in the Field of Nuclear Energy
1959	North-East Atlantic Fisheries Convention Replaced by 1980 Convention
1959	Convention Concerning Fishing in the Black Sea

Year	Title of Agreement
1959	Agreement for the Establishment on a Permanent Basis of a Latin-American Forest Research and Training Institute
1959	The Antarctic Treaty
1959	Agreement Concerning Co-operation in the Quarantine of Plants and their Protection against Pests and Diseases
1958	Convention (with annex) concerning Fishing in the Waters of the Danube
1958	Convention on the continental Shelf
1958	Convention on the High Seas
1958	Convention of Fishing and Conservation of the Living Resources of the High Seas
1956	Plant Protection Agreement for the South Asia and Pacific Region
1954	International Convention for the Prevention of Pollution of the Sea by Oil (OILPOL) (See also 1962 Amendment & 1969 Amendments)
1954	Phytosanitary Convention for Africa South of the Sahara
1952	Agreement Concerning Measures for the Protection of the Stocks of Deep-Sea Prawns, (Pandalus borealis), European Lobsters (Homarus vulgaris), Norway Lobsters (Nephrops norvegjcus) and Crabs (Cancer pagurus) (No Longer in Force)
1952	International Convention for the High Seas Fisheries of the North Pacific Ocean (See also 1978 Protocol)
1951	Convention for the Establishment of the European and Mediterranean Plant Protection Organization
1951	International Plant Protection Convention
1950	International Convention for the Protection of Birds
1949	Convention for the establishment of an Inter-American Tropical Tuna commission
1949	Agreement for the Establishment of a General Fisheries Council for the Mediterranean
1946	International convention for the Regulation of Whaling
1940	Convention on Nature Protection and Wildlife Preservation in the Western Hemisphere
1933	Convention Relative to the Preservation of Fauna and Flora in their Natural State

List of Selected UN Resolutions and Decisions

Year	Title of Agreement
2005	Outcome document of the World Summit 2005, UNGA A/60.L.1
2005	UN Secretary-General Report: In Larger Freedom: Towards Development, Security and Human Rights for All, UNGA A/59/2005
2005	Millennium Ecosystem Assessment
2004	Report of the High-Level Panel on Threats, Challenges and Change, UNGA A/59/565
2004	Report of the Millennium Project: Investing in Development. A Practical Plan to Achieve the Millennium Development Goals

2002	Johannesburg Plan of Implementation (JPoI) and Johannesburg Declaration
2002	Decision of the Governing Council of United Nations Environment Programme (Cartagena Package)
2000	Millennium Declaration (UNGA A/55/2) and Millennium Development Goals
2000	Malmö Declaration – first Global Ministerial Environment Forum of UNEP
1999	Report of the Secretary-General on environment and human settlements (Task Force for UNEP reform), UNGA A/53/242
1997	Programme for the Further Implementation of Agenda 21
1997	Nairobi Declaration on the role and mandate of UNEP
1993	Foundation of the CSD
1992	Rio Declaration and Agenda 21
1990	Foundation of the GEF (pilot phase)
1988	Intergovernmental Panel on Climate Change (foundation)
1987	Report of the World Commission on Environment and Development, UNGA/43/427
1972	Report of the United Nations Conference on the Human Environment
1972	Institutional and financial arragements for international environmental cooperation (foundation of UNEP), UNGA/RES 2997 (XXVII)

Acronyms

ABHS	Advisory Board on Human Security
CBD	Convention on Biological Diversity
CDM	Clean Development Mechanism
CIFOR	Center for International Forestry Research
CITES	International Trade in Endangered Species of Wild Fauna and Flora
COPs	Conferences of the Parties
CHS	Commission on Human Security
CSD	Commission on Sustainable Development
DAC	Development Cooperation Directorate of OECD
DESA	Department of Economic and Social Affairs of UN
DEWA	Division of Early Warning and Assessment of UNEP
Diversitas	An International Programme of Biodiversity Science
ECOSOC	Economic and Social Council
EMG	Environmental Management Group
ENVSEC	Environment and Security Initiative
EU	European Union
FAO	Food and Agriculture Organisation of the United Nations
GA	General Assembly (of the United Nations)
GATT	General Agreement on Tariffs and Trade
GEC	Global Environmental Change
GECHS	Global Environmental Change and Human Security
GEF	Global Environment Facility
GEO	Global Environment Organisation/ Global Environmental Outlook
GDP	Gross Domestic Product
GMEF	Global Ministerial Environment Forum
GNP	Gross National Product
GRID/GPS	Global Resource Information Database/Global Positioning System of UNEP
HABITAT	United Nations Human Settlements Programme
HLP	High-Level Panel
HSU	The Human Security Unit
IAEA	International Atomic Energy Agency
IATF/DR	Interagency Task Force on Disaster Reduction
ICC	International Criminal Court
ICSU	International Council for Science
IDDRI	Institut du Développement Durable et des Relations Internationales

IEG	International Environmental Governance
IFAD	International Fund for Agriculture Development
IFIs	International Finance Institutions
IGBP	International Geosphere-Biosphere Programme
IGM/IEG	Intergovernmental Group of Ministers or their Representatives on International Environmental Governance
IHDP	International Human Dimensions Programme
ILO	International Labour Organisation
IMF	International Monetary Fund
IMO	International Maritime Organisation
IOs	International Organisations
IPCC	Intergovernmental Panel on Climate Change
ISDR	International Strategy for Disaster Reduction (of UN)
IUCN	International Union for the Conservation of Nature
JPoI	Johannesburg Plan of Implementation
LBI	Legally Binding Instrument
MAB	The Man and the Biosphere Programme (of UNESCO)
MARPOL	International Maritime Convention for the Prevention of Pollution from Ships
MDGs	Millennium Development Goals
MA	Millennium Ecosystem Assessment
MEA	Multilateral Environment Agreement
MP	Millenium Project
MPO	Members of the Protocol
NGO	Nongovernmental Organisation
ODA	Official Development Aid
OECD	Organisation for Economic Cooperation and Development
OECD/DAC	Organisation for Economic Cooperation and Development / Development Cooperation Directorate
OPEC	Organisation of the Petroleum Exporting Countries
OSCE	Organisation for Security and Cooperation in Europe
POP	Persistent Organic Pollutants
PPEW	Platform for the Promotion of Early Warning (of ISDR)
Prepcoms	Preparatory Committee Sessions
PRSPs	Poverty Reduction Strategy Papers
SEED	Sustainable Energy & Environment Division
SWP	Stiftung Wissenschaft und Politik/German Institute for International and Security Affairs
TNCs	Transnational Corporations

UNCBD	United Nations Convention on Biological Diversity
UNCCD	United Nations Convention to Combat Desertification
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
UNEO	United Nations Environment Organization
UNEP	United Nations Environment Programme
UNESCO	United Nations Educational and Scientific Organization
UNFCCC	United Nations Framework Convention on Climate Change
UNFF	United Nations Forum on Forests
(UN)GA	(United Nations) General Assembly
UN-HABITAT	United Nations Human Settlements Programme
UNHCR	United Nations High Commissioner for Refugees
UNICEF	United Nations Children's Fund
UNIDO	United Nations Industrial Development Organisation
UNISDR	United Nations International Strategy for Disaster
UNTFHS	United Nations Trust Fund for Human Security
UNU/EHS	United Nations University/Institute for Environment and Human Security
WBGU	German Advisory Council on Global Environmental Change (Wissenschaftlicher Beirat der Bundesregierung Globale Umweltveränderungen)
WCD	World Commission on Dams
WCED	World Commission on Environment and Development
WCMC	World Conservation Monitoring Centre of UNEP
WCRP	World Climate Research Programme
WEDO	World Enviroment and Development Organisation
WEO	World Environment Organisation
WHO	World Health Organization
WMO	World Meteorological Organisation
WSSD	World Summit on Sustainable Development
WTO	World Trade Organization
WWF	World Wildlife Fund

References

Albin, C. (2003): *Negotiating International Cooperation: Global Public Goods and Fairness*. In: *Review of International Studies*. vol. 29, No. 3 (July). pp. 365–385.

Albrecht, U. (Ed.) (1998): *Die Vereinten Nationen am Scheideweg. Von der Staatenorganisation zur internationalen Gemeinschaftswelt?* LIT-Verlag, Münster.

Altvater, E.; Mahnkopf, B. (1999): *Grenzen der Globalisierung*. Westfälisches Dampfboot. Münster.

Altvater, E.; Mahnkopf, B. (2002): *Globalisierung der Unsicherheit.* Westfälisches Dampfboot. Münster.

Andrew, M. (2005): *The Secretary´s General´s High Level Panel Report, Human Security Centre*. <http://www.humansecuritycentre.org/workshops/newyork/newyorkconcept.pdf>, 24 May 2006.

Annan, K. (2004): *High-Level Panel on Threats, Challenges and Change*. In: *International Affairs*. 81, 2.

Annan, K. (2005): *In Larger Freedom: Towards Development, Security and Human Rights for All*, UN. New York.

Bauer, S.; Biermann, F. (Eds.) (2005): *A World Environment Organization. Solution or Threat for Effective International Environmental Governance?*. Ashgate. London.

Beisheim, M.; Zürn, M.; Dreher, S.; Walter, G.; Zangl, B. (1998]: *Im Zeitalter der Globalisierung? Thesen und Daten zur gesellschaftlichen und politischen Denationalisierung*. Nomos. Baden-Baden.

Biermann, F. (1998): *Weltumweltpolitik zwischen Nord und Süd. Die neue Verhandlungsmacht der Entwicklungsländer*. Nomos. Baden-Baden.

Biermann, F. (2005]: *The Rationale for a United Nations Environment Organization*. In: Rechkemmer, A. (Ed.) (2005): *UNEO – Towards an International Environment Organization. Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden. pp. 182–202.

Berkes, F.; Colding, J; Folke, C. (Eds.) (2003): *Navigation Social-Ecological Systems: Building Resilience for Complexity and Change*. Harvard University Press. Cambridge.

Bernstein, J. (2005): *The Role of Science in Strengthening Global Environmental Governance*. In: Rechkemmer, A. (Ed.) (2005): *UNEO – Towards an International Environment Organization. Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden. pp. 281–286.

Birkmann, J. (2005): *Danger Need Not Spell Disaster. But how vulnerable are we*? Research Brief. Number I, UNU-Press. Tokyo. <http://www.ehs.unu.edu/file.php?id=77>, 18 May 2006.

Bogardi, J. J.; Szollosi-Nagy, A. (2002): *Towards the Water Policies for the 21st Century: A Review after the World Summit on Sustainable Development in Johannesburg*. In: Cabrera, E.; Cobacho, R. (Eds.): *Challenges of the New Water Policies for the XXI Century. Taylor & Francis.*

Bogardi, J. J.; Brauch, H.G. (2005): *Global Environmental Change: A Challenge for Human Security. Defining and Conceptualising the Environmental Dimension of Human Security*. In: Rechkemmer, A. (Ed.) (2005b): *UNEO – Towards an International Environment Organization: Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden. pp. 85–112.

Brauch, H. G. (2005): *Environment and Human Security. Towards Freedom from Hazard Impacts*, InterSecTions. No. 2/2005. UNU-EHS. Bonn.

Brunnengräber, A. (2004): *Schöne neue Umweltarchitektur*. In: Rechkemmer, A.; Schmidt, F. (Eds.): *Reform der Architektur globaler Umweltpolitik*. Konferenzbericht: SWP-Kolloquium, Berlin. 4. März 2004 pp. 12–16.

Buschor, G. (1996): *NGOs Advocacy for Environmental Diplomacy to Effect Global Environmental Change*. In: *Transnational Associations.* Vol. 2, pp. 93–97.

Cavalcanti, H. B. (2005): Food Security. In: Dodds, F.; Pippard, T. (Eds.): *Human and Environmental Security. An Agenda for Change*. Earthscan Publications. Earthscan. London. pp. 152–165.

CBD (2000): *Cartagena Protocol on Biosafety to the Convention on Biological Diversity* <http://www.biodiv.org/doc/legal/cartagena-protocol-en.pdf> 30 May 2006.

Chayes, A.; Chayes, A. H. (1995): *The New Sovereignty: Compliance with International Regulatory Agreements*, Harvard University Press. Cambridge.

Commission on Sustainable Development (CSD) (1996): *Indicators of Sustainable Development: Framework and Methodologies*. DESA. New York.

Conca, K. (1996): *Greening the UN: Environmental Organisations and the UN System*. In: Weiss, T. G.; Gordenker, L. (Eds.): *NGOs, the United Nations, and Global Governance*. Boulder, CO. pp. 103–119.

Dernbach, J.; Feldman, I. (2003): *After Johannesburg: Sustainable Development Begins at Home*. In: Environmental Quality Management. Vol. 12. Issue 3. Wiley Perdiodicals, Washington. pp. 87–90.

Ecologic Institute, (2002): *Participation of Non-Governmental Organisations in International Environmental Governance: Legal Basis and Practical Experience*. Ecologic Institute. Berlin.

Ecologic Institute (2005): *Proceedings of the Strategic Research Workshop on International Environmental Governace*, 27 May. Ecologic Institute. Berlin.

FAO (2005): *Forests and Floods. Drowning in Fiction or Thriving on Facts?* <ftp://ftp.fao.org/docrep/fao/008/ae929e/ae929e00.pdf> 24 May 2006.

Flavin, Ch. (2002): *Die Erfahrungen der Klimapolitik und die internationalen Governance-Strukturen*. In: Flavin, Ch.; Young, B. et al. (Eds.),: *Global Governance*. VSA. Hamburg.

Fues, T.; Hamm, B. (Eds.) (2001): *Die Weltkonferenzen der 90er Jahre: Baustellen für Global Governance*. Dietz. Bonn.

Gauer, D. (2005): Initiative to Establish a UN Environment Organization (UNEO). In: Rechkemmer, A. (Ed.) (2005b): *UNEO – Towards an International Environment Organization: Approaches to a Sustainable Reform of Global Environmental Governance*, Nomos. Baden-Baden. pp. 152–154.

GEF (2006): <http://www.gefweb.org>, 24 May 2006.

Gemmill, B.; Bamidele-Izu, B. (2002): *The Role of NGOs and Civil Society in Global Environmental Governance*. In: Esty, D. C.; Ivanova, M. H. (Eds.): *Global Environmental Governance: Options & Opportunities.*Yale School of Forestry and Environmental Studies. New Haven, Ct.

Gehring, T.; Oberthür, S. (Eds.) (1997): *Internationale Umweltregime: Umweltschutz durch Verhandlungen und Verträge*. Leske + Budrich. Opladen.

German Advisory Council on Global Environmental Change (WBGU) (1994): *World in Transition: Basic Structure of Global People Environment Interactions*, Annual Report. WBGU. Bonn.

German Advisory Council on Global Environmental Change (WBGU) (2000): *World in Transition: New Structures for Global Environmental Policy*. Earthscan. London.

Haas, P. M.; Haas, E. B., (1993): *Learning to Learn. Some Thoughts on Improving Global Governance.* Lecture script. Published by the authors. Geneva.

Haas, P. M. (2002): *UN Conferences and Constructivistic Governance of the Environment*. In: *Global Governance*, Vol. 8 | 2002, No. 1. pp. 73–91.

High-Level Panel on Threats, Challenges and Change (2004): *A More Secure World: Our Shared Responsibility*. Report UN-RES-A/59/565. UN, New York.

Hirst, P. (1997): *The Global Economy – Myth and Realities*. In: *International Affairs*. Vol. 73, No. 3. pp. 427–452.

Hünemörder, K. F. (2005): *‚Environment Is Our Love' – Rückblick auf die UN-Umweltkonferenz von Stockholm*. In: Altner, G.; Simonis, U.; Weizsäcker, E.U. et al. (Eds.): *Jahrbuch Ökologie 2006*, C.H. Beck. München.

International Monetary Fund (2000): *Globalization – Threat or Opportunity?* <http://imf.org/external/np/exr/ib/2000/041200.htm>, 24 May 2006.

Ivanova, M. H. (2003): *Partnerships, International, Organizations, and Global Environmental Governance*. In: Witte, J. M.; Streck, Ch.; Benner, T. (Eds.): *Progress or Peril? The Post-Johannesburg Agenda.* Global Public Policy Institute.Washington DC/ Berlin.

Ivanova, M. H., (2005): *Assessing UNEP as Anchor Institution for the Global Environment*. In: Rechkemmer, A. (Ed.) (2005b): *UNEO – Towards an International Environment Organization: Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden:. pp. 119–151.

IUCN; UNEP; WWF (1991): *World Conservation Strategy – Living Resource Conservation for Sustainable Development*. IUCN Publications. Gland.

Kaul, I. (ed.) (1999): *Global Public Goods: International Cooperation in the 21st Century*. Oxford University Press. New York.

Keil, I. (1994): *Die Umweltpolitik der Vereinten Nationen*. In: Hüfner, K. (Ed.) (1994): *Die Reform der Vereinten Nationen*. Leske + Budrich. Opladen.

Knoepfel, P. (1994): *La Portée et les Limites du Principe de Coopération en Politique Environnementale*, ETH Press. Lausanne.

Krasner, S. (Ed.) (1983): *International Regimes*. Cornell University Press. Ithaca.

La Vina, A.; Hoff, G.; DeRose, A. M. (2003): *The Outcomes of Johannesburg: Assessing the World Summit on Sustainable Development*. In: *SAIS Review* .Winter-Spring. Vol. XXIII/ 1. pp. 53–70.

Lazarev, G. (1994): *People, Power and Ecology. Towards Participatory Eco-development.* MacMillan. London.

Maini, J. S. (2004): *Future International Arrangement on Forests.* Background Discussion Paper Prepared for the Country-led Initiative in Support of the United Nations Forum on Forests on the Future of the International Arrangement on Forests. Unpublished paper on file with authors.

Messner, D.; Schade, J.; Weller, Ch. (2003): *Weltpolitik zwischen Staatenanarchie und Global Governance*. In: Stiftung Entwicklung und Frieden (Ed.): *Globale Trends 2004/2005. Fakten, Analysen, Prognosen*. Fischer. Frankfurt /Main. pp. 234–251.

Millennium Ecosystem Assessment, (2005): *Ecosystems and Human Well-Being: Synthesis Report*.<http://www.millenniumassessment.org/proxy/document.356.aspx>,24. May 2006.

Moltke, K. von (2002): *Clustering International Environmental Regimes*. In: Brack, Duncan; Hyvarinen, Joy: *Global Environmental Institutions: Perspectives on Reform*. RIIA. London. pp. 44-51.

Müller, F. (2003): *Kyoto-Protokoll ohne USA – wie weiter?* SWP-Studie 7. SWP. Berlin.

Najam, A. (2002*): The Case Against GEO, WEO, or Whatever-else-EO*. In: Brack, D.; Hyvarinen, J.: *Global Environmental Institutions: Perspectives on Reform*. RIIA. London.

Nielson, D. L.; Tierney, M. J. (2003): Delegation to International Organizations: Agency Theory and World Bank Environmental Reform. In: *International Organization.* Vol. 57. No. 2. Spring. City. pp. 241–276.

Ochs, A. (2003): *Reviving Transatlantic Cooperation towards a Global Threat*. SWP conference paper. SWP. Berlin.

OECD/DAC (1996): *Shaping the 21st Century: The Contribution of Development Co-operation*. OECD, Paris.

Osborne, D.; Gaebler, T. (1992): *Reinventing Government: How the Entrepreneurial Spirit Is Transforming the Public Sector*,. MA. Reading.

Pallemaerts, M. (2003): *Is Multilateralism the Future? Sustainable Development or Globalisation as a Comprehensive Vision of the Future of Humanity*., In: *Environment, Development and Sustainability*. 5 January/February 2003. pp. 275-295.

Princen, T. E.; Finger, M. (1994): *Environmental NGOs in World Politics: Linking the Local and the Global*, Routledge/Taylor & Francis. London.

Prins, G. (2005*): Lord Castlereagh's Return: the Significance of Kofi Annan's High-Level Panel on Threats, Challenges and Change*. In: *International Affairs*. Vol. 81. No. 2.

Rechkemmer, A. (2000*): Environmental Refugees and Environmental Migration*. In: Gate. 3/2000. pp. 6–8.

Rechkemmer, A. (2002): *Is There a Crisis in Global Environment and Development Politics*? After the Johannesburg Summit. In: SWP Comments. Vol. 3 .November. pp. 1–4.

Rechkemmer, A. (2003): *Lösungsansätze für globale Umweltprobleme*. In: *Globalisierung. Informationen zur politischen Bildung 280*. Bundeszentrale für politische Bildung. Bonn. pp. 44–48.

Rechkemmer, A. (2004): *Postmodern Global Governance. The United Nations Convention to Combat Desertification*. Nomos. Baden-Baden.

Rechkemmer, A.; Schmidt, F. (2004): *Reform der Architektur globaler Umweltpolitik. Konferenzbericht*. SWP-Kolloquium. Berlin.

Rechkemmer, A. (2005a): *International Cooperation and Environmental Politics after Rio and Johannesburg*. In: *Sicherheit und Frieden*. Vol. 23,1. pp. 40–44.

Rechkemmer, A. (Ed.) (2005b): *UNEO – Towards an International Environment Organization: Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden.

Rechkemmer, A. (Ed.) (2005c): *Global Governance and UN Reform. Challenges and Opportunities for Environment and Human Security.* InterSecTions. No. 3/2005. UNU-EHS. Bonn.

Reinicke, W. H.; Deng, F. M. (2000): *Critical Choices. The United Nations, Networks, and the Future of Global Governance*. The World Bank. Washington DC.

Rosenau, J. N.; Czempiel, E.-O. (Eds.) (1992): *Governance Without Government: Order and Change in World Politics*. Cambridge University Press. Cambridge.

Schellnhuber, H.-J.; Biermann, F. (2000): *Eine ökologische Weltordnungspolitik*. In: *Internationale Politik*. Vol. 12. December. pp. 9–16.

Schmidt, F. (2003): *Die Architektonik globaler Umweltpolitik. Neueste Beiträge zu ihrer Reform*. SWP-Documentation. SWP. Berlin.

Schulz-Baldes, M., Kempmann, L. (2005): *Towards a United Nations Environment Organization. The Position of the German Advisory Council on Global Change*. In: Rechkemmer, A. (Ed.) (2005b): *UNEO – Towards an International Environment Organization: Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden. pp. 167–181.

Simonis, U. E. (1998): *How to Lead World Society Towards Sustainable Development?* WZB Policy Paper. WZB. Berlin.

Simonis, U. E. (1999): *Global Environmental Problems – Searching for Adequate Solutions*. WZB Policy Paper. WZB. Berlin.

Simonis, U. E. (2005): *Advancing the Debate on a World Environment Organization*. In: Rechkemmer, A. (Ed.) (2005b): *UNEO – Towards an International Environment Organization: Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden pp. 155–175.

Speth, J. G. (2002): *The Global Environmental Agenda: Origins and Prospects*. In: Esty, D. C.; Ivanova, M. H. (Eds.) (2002): *Global Environmental Governance: Options & Opportunities*. Ct. New Haven.

Speth, J. G. (2003): *Perspectives on the Johannesburg Summit*. In: *Environment 45*. January/ February 2003. Vol. 1. pp. 24–29.

Stakeholder Forum for a Sustainable Future (2004): *Network 2005 – Promoting International Sustainable Development*. <http://www.stakeholderforum.org/news/network/ December-Network2005.pdf>, 24 May 2006.

Stewart, R. (1999): *Global Governance for Sustainable Development*. In: *Progressive Governance for the XXI Century*. Conference Proceedings 20th and 21st November. Florence, Italy; New York: European University Institute; New York University School of Law, 2000.

Streck, Ch. (2001): *Umweltpolitik in globalen Netzen*. In: *Ökologisches Wirtschaften*. Vol. 3–4. pp. 16–18.

Subkus, R. (2004): *Reform der Vereinten Nationen im Umweltbereich. Die Bemühungen zur Stärkung des Umweltprogramms UNEP*. SWP-Documentation. SWP. Berlin.

Swiderska, K. (2002): *Implementing the Rio Conventions*: Implications for the South. In: *IIED Opinion*. Special Issue IIED. London.

Töpfer, K. (2002): *Statement at the World Summit on Sustainable Development*. UNEP. <www.unep.org/newscentre/default.asp>, 26 August 2002.

Töpfer, K. (2005): *A Strengthened International Environment Institution*. In: Rechkemmer, A. (Ed.) (2005b): *UNEO – Towards an International Environment Organization: Approaches to a Sustainable Reform of Global Environmental Governance*. Nomos. Baden-Baden. pp. 33–35.

UN (1992): *Agenda 21. United Nations Conference on Environemnt & Development. Rio de Janerio. Brazil, 3 to 14 June 1992.* United Nations Sustainable Development. Rio de Janerio. <http://www.un.org/esa/sustdev/documents/agenda21/english/Agenda21.pdf>, 29 May 2006.

UNDP (1997): *Implementing the Rio Agreements. A Guide to UNDP's Sustainable Energy & Environment Division*. UNDP. New York.

UNEP (2004): *Issue Paper Concerning the Question of Universal Membership Prepared for the 8th Special Session of the Governing Council/Global Ministerial Environment Forum of the United Nations Environment Programme*, UNEP/GCSS.VIII/INF/11. UNEP. Nairobi.

UNEP (2005): *Implementation of the Internationally Agreed Development Goals of the Millennium Declaration: Background Paper.* UNEP/GC.23/10. UNEP. Nairobi.

UNEP (2006): *Declaration of the United Nations Conference on the Human Environment* <http://www.unep.org/Documents.multilingual/Default.asp?DocumentID=97&ArticleID=1503>, 30 May 2006.

UNFCCC (2005): *United Nations Framework Convention on Climate Change.* COP 11 Documents: <http://unfccc.int/meetings/cop_11/items/3394.php>.

UNGA (1992): *Rio Declaration on Environment and Development.* UN Document A/CONF.151/26 (Vol. I). UN, New York.

UNGA (1999): *Report of the Secretary-General on Environment and Human Settlements*. UN Document A/53/242, UN, New York.

UNGA (2000): *United Nations Millennium Declaration,* UN Document A/RES/55/2, UN, New York.

UNGA (2004): *A More Secure World: Our Shared Responsibility. Report of the High-Level Panel on Threats, Challenges and Change*. UN document A/59/565. UN. New York.

UNGA (2005): *In Larger Freedom: Towards Development, Security and Human Rights for All. Report of the Secreatary-General*. UN Document A/59/2005. UN General Assembly. UN. New York.

UNGA (2005a): *World Summit 2005.* UN Document A/59/56. UN General Assembly. UN. New York.

UN Millennium Project (2005a): *Investing in Development. A Practical Plan to Achieve the Millennium Development Goals*. UN. New York

UN Millennium Project (2005b): *Environment and Human Well-being: a Practical Strategy, Task Force on Environmental Sustainability Report*. UN. New York.

UNU/IAS (2002): *International Sustainable Development Governance*. UNU Report. UNU/IAS. Tokyo.

UNU (2005): *As Ranks of "Environmental Refugees" Swell Worldwide, Calls Grow for Better Definition, Recognition, Support.* .Press Release 11 October 2005. <http://www.ehs.unu.edu/file.php?id=58>, 18 May 2006.

Vlek, L.G. P. (2005): *Nothing Begets Nothing. The Creeping Disaster of Land Degradation*, InterSecTions No. 1/ 2005. UNU-EHS. Bonn.

Wapner, P. (1995): *Politics Beyond the State. Environmental Activism and World Civic Politics*. In: *World Politics Vol. 47* (2 April). pp. 311–340.

Wapner, P. (2003): *World Summit on Sustainable Development: Toward a Post-Jo'Burg Environmentalism*. In: *Global Environmental Politics.* February 2003. Vol. 1. pp. 1-10.

Wendt, A. (1996): *Identity and Structural Change in International Politics*. In: Lapid, J.; Kratochwil, F. (Eds.): *The Return of Culture and Identity in IR Theory*. Boulder. London. pp. 50–51.

Willetts, P. (1996): *From Stockholm to Rio and Beyond: the Impact of the Environmental Movement on the United Nations Consultative Arrangements for NGOs*. In: *Review of International Studies*, Vol. 22. pp. 57–80.

Worldwatch Institute (1995): *Partnership for the Planet: An Environmental Agenda for the United Nations*. Worldwatch Publications. Washington DC.

World Bank (2000): *Millennium Development Goals*. <www.developmentgoals.org>, 23 May 2006.

World Commission on Environment and Development (1987): *Our Common Future*. Oxford University Press. Oxford.

WWF (2004): *Living Planet Report 2004*. WWF. Gland.

WWF, Hails, Ch. (2005): *Environmental Security in a Post-tsunami World*. <http://www.panda.org/news_facts/newsroom/index.cfm?uNewsID=54200>. 24 May 2006.

Young, O. R. (1994): *International Governance. Protecting the Environment in a Stateless Society*. Cornell University Press: Ithaca.

Young, O. R. (Ed.) (1997): *Global Governance: Drawing Insights form the Environmental Experience*. MIT Press. Cambridge.

Young, O. R. (1999): *Governance in World Affairs*. Cornell University Press: Ithaca.

Young, O. R. (2002): *The Institutional Dimensions of Environmental Change. Fit, Interplay, and Scale*. MIT Press. Cambridge.

Young, O. R., et al (2005): *Science Plan. Institutional Dimensions of Global Environmental Change*. IHDP Report No. 16. IHDP. Bonn.

Source

No. 1/2005 *Threats, Challenges, Vulnerabilities and Risks in Environmental and Human Security,* by Hans Günter Brauch, September 2005.
ISBN: 3-9810200-4-9 (printed version);
ISBN: 3-9810200-5-7 (electronic version);
ISSN: 1816-1154

No. 2/2006 *Components of Risk. A Comparative Glossary,* by Katharina Thywissen, March 2006.
ISBN: 3-9810582-0-8 (printed version);
ISBN: 3-9810582-1-6 (electronic version);
ISSN: 1816-1154

No. 3/2006 *International Environmental Governance. Issues, Achievements and Perspektives,* by Andreas Rechkemmer, June 2006.
ISBN: 3-9810582-2-4 (printed version);
ISBN: 3-9810582-3-2 (electronic version);
ISSN: 1816-1154

"SOURCE" are distributed free of charge.
Please address orders and inquires by fax and email only:

UNU-EHS Publications
53113 Bonn
Germany

Telephone: +49-228-422-85502
Fax: +49-228-422-85599
Email: roberts@ehs.unu.edu
info@ehs.unu.edu

United Nations University
Institute for Environment and Human Security
(UNU-EHS)

UNU-EHS reflects the overall mission of UNU: 'Advancing Knowledge for Human Security and Development'.

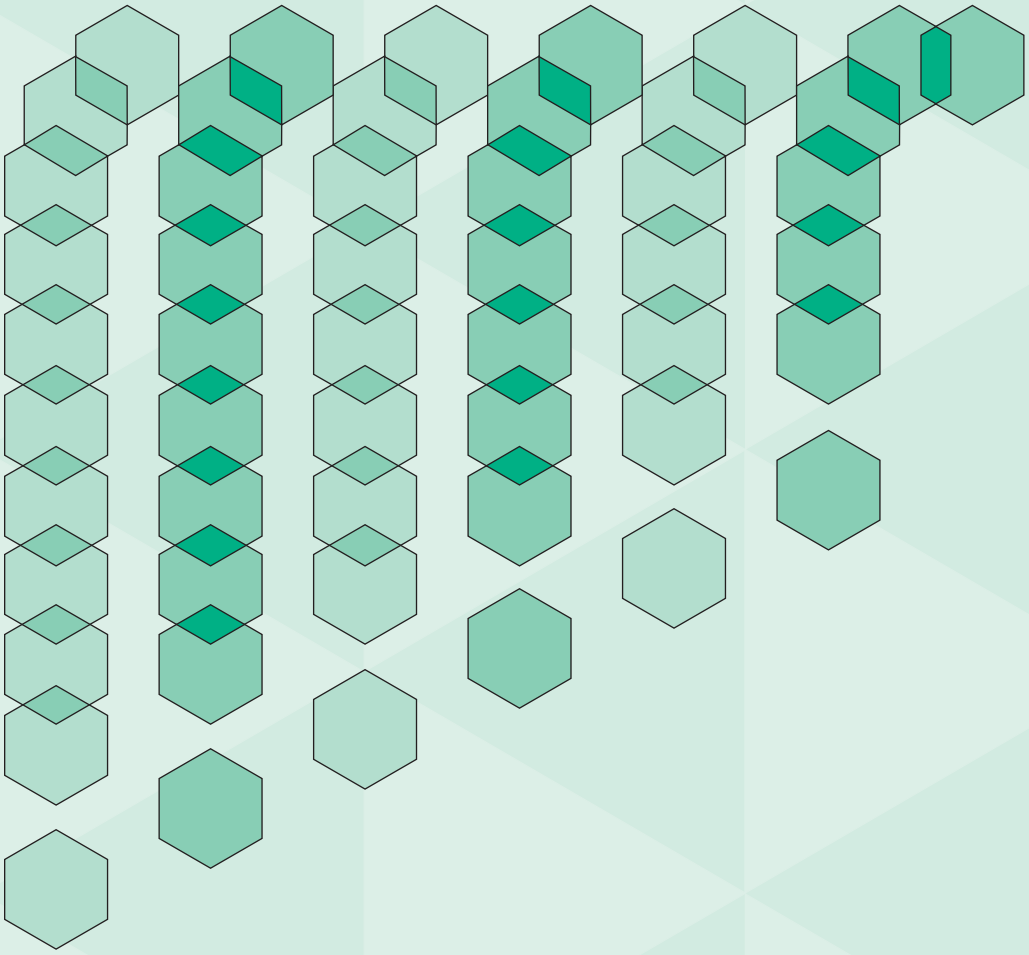
UNU-EHS explores threats to human security from environmental degradation, unsustainable land use practices, and from natural and man-made hazards. The Institute spearheads UNU's research and capacity building activities in the broad interdisciplinary field of 'risk and vulnerability'.

Within this framework UNU-EHS will:

- **Foster better understanding of forces and processes of environmental degradations and their influence on hazard magnitude and frequency and subsequent disasters;**
- **Explore links between different hazard events as well as creeping processes such as climate change, soil erosion and their impact on the inherent risk and vulnerability;**
- **Contribute to development, testing and verification of vulnerability indicators, and investigate relationships between risks, vulnerability and coping capacity.**

Its activities focus on:

- **Generating knowledge;**
- **Building capacity, with focus on young professionals and institutions in developing countries;**
- **Disseminating knowledge to decision makers.**



UNITED NATIONS UNIVERSITY
Institute for Environment and Human Security
(UNU-EHS)
D - 53113 Bonn, Germany

Tel: ++ 49 (0) 228 42 28 55-02
Fax: ++ 49 (0) 228 42 28 55-99
E-Mail: info@ehs.unu.edu
Website: www.ehs.unu.edu