

On Clustering
International Environmental Agreements

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June 2001

1. Introduction

There is widespread consensus that the existing structure of international environmental management needs reform and strengthening. The impetus for this consensus is fourfold:

- The creation of the Commission on Sustainable Development (CSD) at the 1992 United Nations Conference on Environment and Development (UNCED) did not result in the strengthening of international environmental regimes that some may have hoped for;
- The imminent World Summit on Sustainable Development (WSSD) to mark the tenth anniversary of UNCED, scheduled for November 2002 in Johannesburg, creates a deadline against which progress will be measured;
- The continuing need to develop international responses to the challenges of sustainable development has resulted in a structure that is increasingly complex and widely viewed as inadequate to the growing needs that are associated with it;
- The nexus between international economic and environmental policy has grown increasingly powerful, and threatens to result in a deadlock in both trade and environmental negotiations unless some of the organizational issues can be resolved in a satisfactory manner.

This growing consensus that international environmental management needs reform and strengthening found its expression in Decision 21-21 of the Governing Council of the United Nations Environment Programme (UNEP)¹. The UNEP has prepared several documents that provide the basis for a process that is to continue for the coming twelve months and will become part of the preparatory process for the World Summit on Sustainable Development.

Yet while this decision launches a process there remains a remarkable scarcity of realistic proposals on measures that can be adopted. Based on the initial documents from the UNEP process, one of the issues that will be important in this debate is that of

¹ "International environmental governance." Available at: www.unep.org. See also the reports of the Earth Negotiations Bulletin at www.iisd.org.

“clustering,” that is of grouping a number of international environmental regimes together so as to make them more efficient and effective². This is an issue that has not received systematic attention before now³

2. Clustering

The current number of international environmental regimes is clearly too large to be optimal. This large number is rooted in the fact that structural differences exist between many environmental problems, thus requiring separate institutional responses. The institutions required to manage biodiversity are obviously different from those needed for hazardous wastes, and the institutions for climate change differ in many respects from those for water management, or ocean governance for that matter. Nevertheless it no longer appears possible to argue that the actual number of international environmental agreements—in excess of 300 by some counts—represents the appropriate number from the perspective of effectiveness.

The actual merger of existing international environmental agreements is a daunting task. It has been accomplished but once, when the Oslo and Paris Conventions were merged. Yet despite the manifest advantages of a merger and despite the fact that the membership of both agreements was identical and involved a limited number of highly developed states the process of merger took many years to accomplish. The reasons why such a merger does not appear feasible except in singular cases are numerous:

² The views on existing arrangements according to the responses to the questionnaire provided by the secretariats, include the following:

- (a) Clustering provides opportunities for synergies, particularly within each cluster, where agreements have much in common in terms of issues to be addressed;
- (b) Issues of common interest also cut across clusters - for example, trade, capacity-building, and the development of national legislation that supports the implementation of conventions and protocols at the country level;
- (c) Opportunities exist for closer cooperation among the scientific bodies of the agreements;

(d) An increase is occurring in arrangements which enable conventions to work together in a more integrated manner, leading to the development of joint programmes of work in areas of common interest. From: “International Environmental Governance. Report of the Executive Director,” UNEP/IGM/1/2 (4 April 2001), para 69.

³ Konrad von Moltke, *Whither MEA's? The Role of International Environmental Management in the Trade and Environment Agenda*. Report for Environment Canada. www.iisd1.iisd.pubs.html.

- Presumably the negotiators of the historically latest agreement were aware of the existence of prior agreements with related, or even overlapping, subject matter. Yet they chose to negotiate a new agreement, with new institutions, rather than build on the existing structure. The reasons to do so must have been compelling at the time, and any proposal to change these decisions subsequently must at the very least respond to the reasons that prevailed when negotiations were undertaken;
- Membership of related or overlapping agreements is rarely identical. Thus key countries party to the Convention on International Trade in Endangered Species (CITES) are not party to the Convention on Biodiversity (CBD). Their merger entails the risk of losing parties in one regime without gaining more penetration in others;
- Even where membership is identical the domestic constituencies supporting related or overlapping regimes may differ. This is most frequently expressed by differences in bureaucratic responsibilities. Thus the agency responsible for the Basel Convention on the International Transport of Hazardous Wastes may not be responsible for the management of toxic substances and thus play a minor role in the Convention on Prior Informed Consent (PIC) or Persistent Organic Pollutants (POPS). Unfortunately such differences in attribution can pose problems even within a single agency in a given country;
- The existence of an international environmental regime frequently gives rise to congruent structures in international civil society—for example scientific groups, commercial interests, or advocacy organizations—, resulting in a committed constituency whose very existence may be threatened by proposals to merge, move, or abolish a regime;
- In several instances later conventions represent an evolution in thinking about certain environmental problems. Despite addressing related or overlapping problems they may exhibit quite different institutional structures and pursue distinct priorities that a merged regime would have difficulty in balancing;
- Decisions concerning the location of secretariats are often highly competitive; some countries have shown an active interest in attracting the permanent organization associated with a given regime. Having expended effort to obtain the

location of a secretariat in their country, having generally been required to support that secretariat in a variety of ways that required budgetary allocations, the countries concerned have strong stakes of ownership in the secretariat.

In practice any attempt to negotiate all the factors that obstruct merger, even when it seems logically unimpeachable, will require extraordinary effort while possibly producing modest results in terms of greater effectiveness or efficiency. At the very least it risks the misallocation of one of the scarcest of resources: the negotiation effort of the constituencies involved and the attention of senior policy makers.

Under these circumstances it may be appropriate to seek a variety of institutional and organizational arrangements short of merger that will increase the efficiency and effectiveness of existing agreements without requiring elaborate changes in legal or administrative arrangements. This is what is meant by “clustering.”

It is important to view clustering as a process and not as a single act, so the immediate task is to create conditions that are conducive to fostering a process of clustering. The assumption is that the experience of working in clusters can give rise to subsequent changes that contribute to further increases in efficiency and effectiveness.

2. The Tools of Clustering

The notion of clustering assumes that there are ways to promote closer integration of related or overlapping international environmental regimes, short of merging organizations. It is worth listing the tools of clustering, even though not all may be applicable to every cluster, and certain clusters may have additional tools that can be utilized.

3.1. *The Conference of Parties*

Most international environmental regimes have a Conference of Parties (COP) or some similar institution as the ultimate source of decision-making. The COP meets periodically

in locations that are determined from one meeting to the next. Several important options are available with regard to the COP, precisely because no permanent commitments have been made thus far concerning timing and location.

3.1.1. Colocation. The COP of clustered agreements can be held simultaneously in a changing location. This would facilitate coordination between the regimes while leaving a range of options open concerning the relationship between these simultaneous meetings, for example consecutive scheduling, joint bureaus, or joint activities relating to civil society.

3.1.2. Permanent Location. In addition to deciding to hold COPs simultaneously it is possible to always hold them in the same location, whether simultaneously or not. This permits the development of an infrastructure to support the COPs, including the possible creation of specialized missions from member states. One of the lessons to be derived from the experience of the WTO is the advantage of a single location and the importance of permanent missions devoted to the WTO agenda. These missions have in fact become an integral part of the organizational structure of the WTO, and explain in large measure how the organization manages to cover a wide agenda with a relatively small secretariat.

The advantages of holding simultaneous meetings are clear. This would also hold the additional benefit of facilitating developing country participation in the environmental regimes. It would also tend to strengthen the role of member states.

3.1.3. Executive and Subsidiary Bodies. Many COPs have executive and subsidiary bodies that meet between sessions of the COP. The scheduling of these meetings can occur according to a variety of conventions, alternating between a permanent location and a flexible one (as in the case of the World Bank and International Monetary Fund annual meetings), always in alternating locations, or in some rotating pattern with the COP itself.

There are numerous permutations that can evolve on the basis of the above variables. While it is theoretically desirable to have COP meetings occur at the location of the

regime secretariat(s), it is certainly not indispensable. Most international environmental regimes currently hold COPs at locations remote from their secretariat. This practice can be continued. Given that the secretariats of clustered regimes may actually be in several locations, there is no reason to assume that holding the COPs at the seat of one of them will exhibit particular advantages. It would presumably be possible to establish a service unit common to the clustered regimes at the seat of the COP to provide essential services on a continuing basis.

2.2. *Subsidiary Bodies*

Most international environmental regimes have a number of subsidiary bodies concerned with scientific and financial matters. It may prove possible to move beyond colocation to a more permanent form of coordination between these bodies. This measure can precede coordination of COPs or follow it, depending on priorities of the particular cluster. Delay in holding simultaneous meetings or identifying a permanent location for the subsidiary bodies—which can but need not be identical to the location of the COP—can help to ease the transition and contribute to maintaining the presence of international environmental regimes in a wide range of locations.

2.3. *Secretariats.*

All major international environmental regimes have a secretariat to ensure continuity and coordination. These secretariats are often the most visible manifestation of the regime so that efforts at strengthening and coordination tend to focus on them. At the same time, moving a secretariat requires extraordinary effort.

The specific role of the secretariats can differ from one regime to another, reflecting both different legal authority and the result of a dynamic development of the regime itself. The organizational arrangements for individual secretariats can also differ widely, even among quite small organizations, depending on whether it is an independent body, located within some larger international organization, revolving between states (like the Antarctic secretariat) or based on a nongovernmental organization. Finally leadership plays a significant role in secretariats, which can acquire certain characteristics as a consequence of the personality of the person responsible for them.

Given all these constraints, the prospects for dramatic reorganization of secretariats appear remote. In practice such reorganization is not as vital as it may appear. Regime secretariats are responsive to a range of factors, including the COP, domestic and international constituencies, financial arrangements, the sources of scientific advice and media pressure, which are more amenable to change than the secretariats themselves.

In practice every cluster is liable to involve several existing regimes with separate secretariats, which will only rarely be in the same location. Consequently solutions need to be found that permit these secretariats to work more closely together, short of actually moving them. Staff exchanges, the use of common staff under certain circumstances, and the aggressive adoption of communications technologies all can serve to alleviate what might otherwise appear as an insuperable problem.

3.4. *Financial Matters.*

Purposeful use of financial incentives represents a significant factor in clustering. Like most other measures to promote clustering, the use of financial tools is promising only if it is undertaken consistently by all key parties to an agreement. Nevertheless individual parties may find that it is possible to make appropriate adjustments in their own approach to financial issues relating to regime clusters. While this may not produce the desired changes in the regime as a whole it can increase the efficiency in the allocation of that party's resources and create incentives for other parties to act in a complementary manner.

Most international environmental regimes are supported by voluntary contributions. The power of the purse represents an important tool in situations where a significant group of parties agrees on the need to promote clustering. In these instances the parties that finance the infrastructure of the regime would be justified in using their position to accelerate and give direction to the clustering process.

3.4.1. Regime Budgets. The budgets for the operation of individual environmental regimes are generally quite modest—with the signal exception of the climate regime. Yet

taken together the budgets of all regimes in a cluster can be substantial. These include the resources required to ensure the participation of developing countries. All regimes struggle to obtain adequate resources to ensure their operations, with voluntary contributions predominating. Any move to cluster resources for groups of regimes would create powerful incentives for coordination between those responsible for the regimes' finances.

3.4.2. Development Assistance. Many international environmental agreements call for the provision of new and additional funds for development assistance. Indeed, UNCED involved an implied bargain that developing countries would participate more actively in international efforts to protect the environment and developed countries would contribute more vigorously to the funding of relevant activities. The extent to which these commitments have been met has not been tracked but the consensus appears to be that developed country performance in this area leaves much to be desired. Close tracking and active coordination of development assistance funding for certain clusters should generate incentives to ensure the more effective and efficient use of the scarce resources that are available.

3.4.3. Subsidies. Subsidies are an integral part of the environmental policies of any country. Most countries have found that in the early stages of creating essential environmental infrastructure subsidies are necessary to accelerate the process and to drive it beyond the relatively modest parameters that have been set. Such subsidies involve the risks associated with any program of subsidy—that they become self-defeating, subject to capture by interest groups and ultimately represent an obstacle to the achievement of market-based environmental objectives. Despite these drawbacks, subsidy programs are an integral part of any environmental strategy, whether open or disguised in a variety of ways. In effect they represent a way to finance environmental conservation that does not have an identifiable market value.

The Global Environment Facility is an institution for international subsidies. Its role in a more clustered system needs to be considered carefully. In practice, each cluster involves quite distinct types of activities that require international support. It appears desirable to

ensure a closer link between the substantive authority and the project activity than has been accomplished under the current structure.

3.5. *Electronic Clustering.*

At least theoretically, modern communications technology offers a range of opportunities for reinforcing the relationship of related and overlapping environmental regimes. In practice, modern technology relies on personal relationships as much as previous technologies so that electronic activities on their own entail few substantive benefits. They can, however, provide a powerful tool to support other kinds of clustering activities and facilitate linkages over distance.

3.6. *Cluster Coordinator.*

No cluster can function without clear assignment of roles and responsibilities. In many respects this assignment—and the likely conflicts surrounding it—form the heart of any clustering activity. It is critical to ensure that an individual, or a group of individuals, are given clear responsibility for the work of a cluster. Geographic location is a variable that can be utilized creatively, as can the range of possible organizational affiliations of such individuals or groups. In other words, cluster coordination can occur at the site of one of the secretariats, at the site of joint COPs, or at a site that offers particular advantages from the perspective of the UN system, New York or Geneva in particular.

In theory, international secretariats are the servants of the member states and the COP. Yet in practice the need to articulate underlying issues in a continuous manner has given secretariats—and in some instances their respective leadership—roles that transcend this fairly limited notion. Clustering of COPs will tend to reinforce the role of states in the regimes, in particular if a system of permanent representatives at the location of a COP emerges. Clusters will, however, have need of leadership and a visible public presence, particularly where issues of great public saliency are concerned. Striking the right balance in this regard is one of the major challenges of any clustering process.

3.7. *Implementation Review.*

International environmental regimes are characterized by a high degree of subsidiarity. In other words, the activities of several levels of governance must work together. From this perspective an active policy of implementation review that encompasses both the national and the subnational levels appears particularly important.

One option is to undertake a review of all international environmental obligations of a given country. This creates incentives to strengthen all international environmental regimes, and can also provide important guidance to funding support for implementation in developing countries.

An alternate approach would focus on groups of related or overlapping agreements, permitting a more detailed and specific review. In this instance it becomes possible to articulate quite specific performance goals for the period between reviews in relation to a given cluster.

Reviews could proceed along the lines established by the WTO and the Organisation for Economic Cooperation and Development (OECD). This involves the preparation of a country report, either by the authorities of the country in question or by the relevant secretariats, or by an agency such as the United Nations Environment Programme (UNEP), followed by a country visit by a team of “reviewers.” The reviewers are chosen in consultation with the country involved and should be given an opportunity to travel as necessary and to meet with any person or groups in the country that they find necessary. The country report, together with the reviewers findings, are subsequently discussed in a forum of member states established for this purpose.

3.8. *Communications*

The public image of international regimes is formed to a significant degree by their communications strategy. Clusters can develop a joint communications strategy, including publications and an internet strategy, that can help to strengthen the internal links of the cluster.

3.9. *Capacity Building*

Environmental management is institutionally demanding. It requires a large number of effective institutions at the domestic level, and it requires administrative structures that promote cooperation. Since many environmental decisions have potential impacts on a wide range of economic interests there needs to be a highly developed consultative process to minimize such impacts, and there needs to be a review process to ensure that decisions that are taken are appropriate and legitimate.

These activities impose significant burdens on domestic institutions in all societies. In developing countries the problems can become insuperable, so that even when the political will exists to promote sustainable development it can prove almost impossible to advance this agenda without significant investments of capacity building.

Many international environmental agreements contain provisions concerning special and differential treatment of developing countries and capacity building. Properly conceived, capacity building initiatives can become powerful tools for clustering, conveying the necessary skills and providing a more coherent and effective international environmental management structure to interact with.

4. Creating Clusters

It is common practice to group international environmental agreements by topic, since this is preferable to the only alternative—chronological order—to create some structure in a universe of several hundred agreements. Like any system imposed on a structure that evolved without systematic intent, this requires a certain degree of arbitrary assignment. It is not the purpose of the following grouping to achieve a perfect system to categorize all international environmental agreements. Its intent is to form clusters of agreements not by subject area but by problem structure. While some clusters remain quite predictable, it emerges that some agreements that apparently deal with the same issue—the atmosphere or conservation for example—do not belong together because of major institutional differences that are rooted in differences in problem definition. Other agreements that appear to deal with institutional issues relevant to most problem

clusters—the PIC Agreement for example—in fact address only the institutional needs of a single cluster.

The formation of clusters is clearly a matter for broad discussion, careful consideration and full negotiation. It is not the kind of issue that is amenable to analytical approaches alone since only the process of negotiation can ensure that all important stakeholders are heard and all significant issues are given due consideration.

4.1. The Conservation Complex⁴.

The conservation complex is characterized by two major global conventions whose relationship remains a matter of discussion, and a number of other global and regional agreements that are at present poorly integrated. Three of the conventions mark the evolution of international approaches to conservation. Ramsar is largely devoid of substantive international obligations and sees its primary focus at the national level. CITES addresses the most obviously international dimension of conservation—trade in endangered species. At the same time it has become the focus of an extraordinary scientific effort to identify and assess potentially endangered species of all kinds. The Convention on Biodiversity (CBD) seeks to achieve a fully integrated approach to conservation, recognizing both human use and the need to protect entire ecosystems, addressing both in situ and ex situ conservation techniques.

While the complex would clearly benefit from a significant organizational overhaul, each regime has developed its own constituency, which is frequently willing to defend its independence. Integration requires a comprehensive understanding of the issues and of the role each of the regimes can play in developing an international response to the imperative of conservation.

To represent a significant step forward, a Global Conservation Regime would need to provide additional institutional support to the protection of wetlands and other critical habitat and incorporate most regional conservation activities, several of which deal with

migratory species that are not covered by the global agreements⁵. The lack of integration between the global and regional conservation regimes, which do not even operate according to a common understanding of the issues and an accepted distribution of roles, is one of the major current challenges facing international conservation efforts.

An initial step could be the identification of critical conservation areas that are of importance to all or most of the conservation regimes and to focus resources on these areas⁶. This is itself a matter for international negotiation rather than expert analysis.

4.2. *The Global Atmosphere*⁷.

The two agreements in this cluster involve complex institutional arrangements. Indeed, one of the burdens on the climate regime is the tendency of some observers to assume that the ozone regime represents a template on which to build⁸. In practice the ozone regime is based on a relatively traditional agreement that identifies pollutants and then takes steps to reduce their production, use and emission to levels that are deemed acceptable. Since this involves a class of industrial chemicals that are used in the production of a range of goods, the ozone regime demands a good deal of adjustment from manufacturers but has little direct impact on the end users of the affected products, except perhaps with regard to price. The climate regime deals with several “pollutants” that are ubiquitous, indeed that are an integral part of life. Control of these substances requires structural change at all levels of the economy. The resulting regime is essentially an investment regime that seeks to reduce emissions by shifting the focus of public, corporate and private investment.

⁴ World Heritage Convention; Convention on Biological Diversity; Convention on the Conservation of Migratory Species; CITES; Ramsar. The Convention to Combat Desertification, the FAO International Undertaking on Plant Genetic Resources, and the International Tropical Timber Agreement.

⁵ The Bonn Convention on the Conservation of Migratory Species has not evolved into the universal framework that its drafters envisaged, lacking some key members and without a strong civil society constituency.

⁶ There are currently competing definitions of “critical area.” These differences would need to be negotiated so as to arrive at a single operational definition.

⁷ UNFCCC; Vienna Convention and Montreal Protocol. LRTAP exhibits significantly different problem structure.

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Despite these differences, the two global atmospheric regimes represent an obvious clustering. Yet the prospects for achieving significant progress are burdened by the historical decision to set up the United Nations Framework Convention on Climate Change (UNFCCC) as an essentially independent organization within the UN system rather than assign it to one of the competing claimants—primarily UNEP and WMO. The UNFCCC is already one of the largest convention secretariats in the United Nations, and the complexity of the issues it faces suggest it will grow further in importance.

4.3 *The Hazardous Substances Complex*⁹.

All of the agreements in this cluster are managed by UNEP, so that it already exhibits a certain coherence. The control of hazardous substances is essentially the control of the products of a few industries, primarily chemicals and minerals production. A preponderant portion of these industries is located in or controlled from OECD countries. Consequently ways must be found to better integrate the OECD work in this area into a broader global framework.

The recently concluded Convention on Prior Informed Consent (PIC) and the Convention on Persistent Organic Pollutants (POPS) represent essential building blocks of this cluster. With these in place it should be possible to move towards greater integration, but for the obstacles outlined above. In many countries the agencies responsible for hazardous wastes are not identical to those responsible for the control of toxic substances. Frequently waste management is the responsibility of federal subunits while toxic substances control is invariably the responsibility of national authorities.

The World Health Organisation (WHO) has done important work on heavy metals in the environment that reflects the priorities of the health professions. The activities of the Food and Agriculture Organisation of the United Nations (FAO) concerning pesticides and the work of the Codex Alimentarius Commission on residues in food (a joint undertaking of FAO and the WHO) are relevant but will presumably remain outside the

⁹ Bamako Convention; Basel Convention; Convention on Civil Liability for Damage Caused During Carriage of Dangerous Goods by Road, Rail, and Inland Navigation Vessels; PIC Convention; Convention on Transboundary Effects of Industrial Accidents; Waigani Convention; POPS Convention. The FAO Code

core cluster. All of these activities would need to be reflected in the hazardous substances complex in some fashion.

An additional challenge in the hazardous substances complex is presented by the need to integrate the OECD chemicals process, which is essentially a regional international agreement. This is an area in which the use of creative institutional arrangements is required to ensure the integrity of the OECD process, which has been won with great difficulty, while better integrating it into the wider global structures¹⁰.

4.4. The Marine Environment Complex¹¹.

There are a large number of agreements that deal with the marine environment involving several organizations, including the International Maritime Organisation (IMO), UNEP, and the Law of the Sea (LOS). The IMO manages agreements concerning pollution from ships; UNEP manages the regional seas program; and the LOS Secretariat handles the broader legal framework. The approach of each group of agreements is markedly different.

The LOS is the most classic of all fields of international law, carrying the encrustation of several centuries. While it represents the framework within which all other marine activities are undertaken it has a mixed record of effectiveness with regard to matters that concern the environment. It has, however, given rise to the Law of the Sea Tribunal, a unique institution in that it parallels the work of the WTO dispute settlement process but with a higher degree of predictability and transparency.

Over a period of several decades, the IMO has succeeded in bringing the problem of intentional discharges of oil from ships into a management structure that holds out the prospect of being effective. It has reduced the pollution risks associated with marine accidents by steadily improving the design of the ships carrying the most hazardous cargoes. It has established rules concerning the intentional discharge of oil from ships, in

of Conduct on the Distribution and Use of Pesticides could be included since it has similar problem structure. Its institutional approach is, however, hardly comparable.

¹¹ IMO Conventions; Regional Seas Conventions; OSPAR Convention; Helsinki Convention.

particular for deballastage, that can address what is the largest source of oil pollution from ships, even though enforcement can be difficult. The IMO has always struggled with the problems posed by flag state jurisdiction, and some of its advances are due to innovations limiting the reach of this principle, for example by permitting the introduction of port state jurisdiction over certain activities.

UNEP's regional seas program addresses the broader environmental agenda, including the dumping of waste at sea—an activity that has largely been stopped—and the exceedingly difficult challenge of controlling land based pollution so as to protect the marine environment. In principle, the regional seas program also addresses issues of coastal zone management, an area that is particularly burdened in most countries by the existence of numerous competing jurisdictions. The UNEP program is hampered by its technical complexity and the fact that it imposes demanding requirements on national governments that are not always willing or able to live up to them.

The current effectiveness of the agreements in this complex is mixed. Further strengthening of port state jurisdiction and of the rights of states to control their exclusive economic zones (EEZ) may prove helpful. The creation of an effective cluster in this area would require a very substantial amount of negotiating effort.

4.5. *The Extractive Resources Complex*¹².

This is the most difficult of all environmental issues, and the one with the largest potential impact on the trade regime. At present, international commodity regimes are largely mixed public/private structures designed to extract natural resources and to distribute them globally, for example the banana regime, the aluminium regime, the cotton regime, or the forest products regimes. Attempts to introduce environmental criteria, let alone sustainable development criteria, into these regimes have met with limited success. Yet all of these regimes have a significant sustainable development dimension. The environmental impacts are largely focused at the extractive end, while funding for each

¹² This complex includes most forestry agreements and public/private initiatives such as the Forest Stewardship Council or the Marine Stewardship Council. It also encompasses fisheries and agreements concerned with the environmental impacts of agriculture. For a theoretical background, see Konrad von

regime, including for sustainable development, needs to come from the consumer rather than from public sources. Consequently the problems of these regimes relate as much to the functioning of international markets as to the possibility for developing international agreements covering their sustainability.

4.6. Regional Clustering

A significant number of environmental issues are based on the use and management of land. While many of these issues have an international dimension it is typically not global in character, affecting neighboring states within a regional land pattern. River basins are an obvious example of such linkages. In addition long range air pollution, while theoretical a global phenomenon in practice requires regional responses.

Addressing these issues requires a continuous balancing of conflicting policy priorities, involves high levels of inter-jurisdictional cooperation, and is often viewed as particularly sensitive to concerns of security and sovereignty. All of these factors render a global regime highly impractical, yet it is necessary to ensure a basic level of international cooperation. The response needs to be some form of regional clustering. The basic structures for such clustering exist in Europe, based on the UN Economic Commission for Europe and a suite of agreements that have evolved steadily following conclusion of the Helsinki Accords in 1977 and the civic revolution that swept Eastern Europe ten years later. Conditions are much less well developed in other regions and in some, such as Asia and the Pacific, even first steps appear not to have been taken.

5. Joint Institutions.

Several institutions¹³ recur throughout the structure of international environmental management. International environmental regimes are characterized by a large variety of institutions. The reasons are to be found in the structure of environmental problems that

Moltke, et al., *Global Product Chains: Northern Consumers, Southern Producers, and Sustainability (Trade and Environment 15)*. Geneva: United Nations Environment Programme, 1998.

¹³ The term “institutions” is used here in its strict technical sense to denote the rules of the game that characterize a regime. Thus “property” is an institution but UNEP is an organization.

require social and economic institutions to address a phenomenon that is governed by the laws of nature¹⁴. As a consequence international environmental regimes have exhibited a remarkable degree of innovation as they have struggled to match their institutional arsenal to the structure of the problem they attempt to address.

Some institutions, in particular those that translate science into policy and that seek to assess environmental conditions in a systematic manner, are pervasive throughout international environmental regimes. Even when not every regime utilizes a particular institution, it is worth considering the options for creating crosscutting rules to ensure consistent application and to develop new organizational structures to promote greater efficiency and effectiveness. This appears as an area of activity for a broadly based organization, such as UNEP.

5.1. Science Assessment.

Science assessment is the interpretation of research for policy purposes. Most countries use science assessment institutions to mediate the complex relationship between scientific research and public policy. Arguably the most characteristic institution of all environmental regimes—because without scientific research there can be no environmental management—science assessment offers a range of options for the clustering process at a universal level.

Few international environmental regimes have the necessary resources to undertake science assessments of their own or even to review science assessments undertaken at national level with a view to identifying the specifically international interest. Apart from the Intergovernmental Panel on Climate Change (IPCC), there are no fully developed science assessment mechanisms at the international level. The resources required to undertake full-scale science assessment on a major issue of international environmental concern are very significant. It makes much more sense to focus the necessary resources on one or two regimes at any one time rather than distributing them widely, as now occurs. Consequently a structure needs to be devised that can draw on the best scientists

¹⁴ Young, Oran, ed., Oran Young, ed., *Global Governance. Drawing Insights from the Environmental Experience*. Cambridge, MA: MIT Press, 1997.

worldwide in changing fields of research. The model would be the US National Research Council (a branch of the National Academy of Science), which is required by charter to provide government with advisory services (for pay) yet manages to maintain its independence and its ability to identify appropriate participants in its panels from a range of disciplines.

5.2. *Monitoring and Environmental Assessment.*

Specific environmental measures are based on numerous assumptions about environmental conditions, the need to adopt measures, and the impact of these measures on environmental conditions. These assumptions are fraught with many uncertainties, attributable in particular to lack of scientific knowledge or lack of information about actual environmental conditions. Responsible policy making will ensure that these assumptions are tested on a continuous basis, primarily through further research and through an appropriate program of monitoring and environmental assessment.

Monitoring and environmental assessment are also required for international environmental policy. In practice, much of the monitoring will be undertaken at national or subnational levels, but it is important to ensure comparability of data and coordination of monitoring schedules to ensure that international concerns can also be addressed. Some countries may require assistance in setting up and funding monitoring systems. The actual assessment process needs to have an independent international component.

Monitoring and assessment are cross-cutting activities. It does not make sense to engage in separate monitoring for each cluster since many of the pollutants of concern—in particular heavy metals and persistent organic pollutants—migrate from one environmental medium to the next and must be monitored on an integrated environmental basis. Consequently this represents an institution that is best entrusted to a universal organization. The current system of monitoring and assessment needs to be significantly strengthened. This requires both additional funding and a process to set priorities and to eliminate duplication of effort.

5.3. *Transparency and Participation.*

Transparency and participation have emerged as central institutions for all environmental regimes, a reflection of both scientific uncertainty and subsidiarity: public authorities, even local authorities, cannot have detailed knowledge about environmental conditions in specific locations, and some environmental phenomena emerge in the field before they become apparent in the laboratory. The institutions of transparency and participation have become the standard response to this dilemma. Indeed, most concerned with environmental issues have come to expect certain levels of information and access as an integral part of all environmental regimes.

Given the importance of these institutions in environmental affairs it is remarkable that formal rules have not been adopted in international environmental agreements to formalize them. More recent agreements tend to include the necessary provisions. Many environmental regimes tend to rely on established practice and informal understandings. The Århus Convention on Access to Information, Public Participation in Decision Making and Access to Justice in Environmental Matters (1998) represents a first step towards developing universally applicable rules—although they do not apply to international agreements but rather are binding on countries party to the Convention only. The Århus Convention was adopted in the context of UN-ECE, and has not been signed by all members of that body¹⁵.

An attempt to develop a broader international agreement applicable to all international environmental regimes is necessarily fraught with risk: asked to codify current practice some countries are likely to seek to limit it.

5.4. *Implementation Review.*

In most international environmental agreements implementation review is the responsibility of the COP. One instrument to promote greater coherence among these regimes, and within their member states in matters of international environmental management, is to institute joint implementation review of individual countries. Such a review process would require some level of cooperation between the regimes involved

and at the same time foster greater coherence in the implementation efforts of the countries that are being reviewed.

This is an area where the example of the GATT/WTO may be helpful. The Trade Policy Review Mechanism (TPRM) has evolved patterns of work that appear to be acceptable to member states while still generating information that can be useful to other states and at the international level. The essential characteristic of an Environmental Policy Review Mechanism would, however, be its ability to address all aspects of international environmental management rather than basing its approach on a limited number of agreements alone. In particular it would need to be able to include regional agreements or the instruments of the OECD.

5.5. *Dispute Settlement.*

Dispute settlement (based on legally binding rules) is the issue most frequently mentioned as distinguishing trade regimes from environmental ones. It is also frequently mentioned as an area where environmental regimes could benefit from further institutional strengthening. Yet there is no evidence from environmental regimes themselves that this an area of great current concern. In practice the International Court of Justice (ICJ) serves as a dispute settlement mechanism of last resort. Not only has it not been used, there are some cases where it has been explicitly avoided and in those instances alternative forms of dispute settlement have emerged.

The assumption that stronger dispute settlement in environmental agreements will relieve pressure from the trade dispute settlement process assumes a parallelism between trade and environment that does not exist. In the trade regime, dispute settlement is the premier implementation tool—and to a significant degree the pathway by which interpretation of the agreements can be adjusted¹⁶—and consequently the place to which issues such as the environment must migrate. Environmental regimes pursue effectiveness and

¹⁵ Canada, Georgia, Russia, and the United States have not signed

¹⁶ This is an area in which theory and practice diverge in the trade regime. Theoretically dispute settlement should not be a vehicle for interpretation of the WTO agreements. In practice this has repeatedly occurred, for example in the evolving interpretation of Art. XXb and XXg. See John Jackson, “the Legal Meaning of a GATT Dispute Settlement Report: Some Reflections,” in: John Jackson, *The Jurisprudence of GATT &*

implementation through entirely different institutions and there is no reason to assume that the availability of a reinforced dispute settlement mechanism will change that in any way.

The nature of the legal obligations entailed in MEA's—and the structure of the ensuing regime—is such that environmental regimes rarely generate the kind of state-state dispute that is characteristic of the WTO system. Appropriate remedies would be difficult or impossible to craft. When such disputes arise, they tend to migrate directly to the Conference of Parties of the relevant agreement since they require a process of negotiation rather than adjudication. It is certainly possible to interpret the long and arduous process on listing, relisting, and possibly delisting the African elephant in CITES, which several times worked its way through the institutions of the regime to the COP and back, as a process of dispute settlement.

Environmental disputes between private parties represent a challenge to the international legal system. The protracted dispute about salt pollution of the Rhine is emblematic for these issues. The issues such private disputes raise are issues of general international law rather than of the institutions of environmental regimes. They need to be addressed in other fora.

The disputes that can arise in international environmental regimes concern lack of implementation of domestic environmental law, whether or not it implements international obligations. One state can hardly launch a complaint about such non-compliance against another. No state is flawless in this regard. The adequacy of domestic implementation is a matter that requires careful assessment. It is not a matter of interpreting international legal obligations and the remedy is not a change in the rules, domestic or international, but a change in the functioning of domestic institutions.

The only institution that has been identified to launch such disputes is that of citizen complaints. This institution has been used in the European Union and in NAFTA with

WTO. Insights on Treaty Law and Economic Relations. Cambridge: Cambridge University Press, 2000, pp. 118-132.

mixed results but it has certainly strengthened international environmental management. This practice, carefully defined, together with forms of alternative dispute settlement such as mediation procedures could strengthen international environmental regimes while reflecting their particular structure and needs.

6. Sustainable Development

The fact that environment and development do not need to be in conflict has been reaffirmed many times, and there is much objective evidence to support this assertion. Yet the perception remains that countries of limited means face a stark choice between these two policy priorities. Wealthier countries are thought to be able to afford the luxury of wanting both environmental quality and development at the same time. This gap between evidence and perception represents both a challenge and an opportunity. It must be assumed that relatively modest incentives can generate quite significant results, and that many changes can be economically self-sustaining in the long term.

If the process of clustering is to have any prospect of realization it will need to have a visible positive impact on efforts to move towards more sustainable forms of economic activity. To this end, the clustering process will need to address a number of issues that link environment and development and that recur in virtually every international environmental regime—but that have not been effectively implemented in any of them.

6.1. *Development Assistance.*

Bilateral and multilateral development assistance has been the subject of a long process of criticism and review from the environmental perspective, augmented since 1992 by the broader vision of sustainable development. Despite extensive efforts at reform it remains true that much official development assistance supports environmentally unsound or unsustainable activities. Apart from the direct impact of each particular project the symbolism is hard to overstate. As long as developed countries, directly or through multilateral agencies, continue to pour money into projects that are questionable from the perspective of sustainability, particularly when these projects involve their own

companies and services, the official declarations in favor of sustainable development will carry little weight with developing countries. Similarly the emphasis on subsidizing “additional” international costs suggests that all environmental costs are additional, rather than a normal cost of doing business.

ODA also has a positive role to play in international environmental management. It is the source of most resources that become available for capacity building and otherwise to support the participation of developing countries in international environmental governance. It can also support the development of the necessary infrastructure to provide essential environmental services, ranging from the support of fundamental scientific research to the construction of waste management and wastewater treatment facilities.

Official development assistance faces a multiple crisis at the present time, arising from the changes wrought by globalization. As private capital flows take up the most profitable projects in developing countries, the economic viability of publicly funded projects becomes increasingly tenuous. This risks decreasing public support for the remaining activities. A sharp focus on the transition to sustainable development holds some promise of attracting broader support from citizens in developed countries.

6.2. *Markets.*

Markets are the defining institution of the global economy. Clearly this involves many markets rather than just a single, global one. The process of globalization has transformed markets, and as markets change so must the disciplines that are in place to ensure that their outcomes are not unacceptable from the perspective of public policy.

Perhaps the most important of all market-oriented environmental principles is the polluter pays principle (PPP), essentially a principle of cost attribution designed to ensure that market prices reflect environmental costs to the maximum extent possible. Like “non-discrimination” in the trade regime, the PPP needs to be implemented through a panoply of institutional mechanisms, ranging from regulation to the creation of positive and negative financial incentives. International markets require such mechanisms as an

essential discipline to ensure that environmental outcomes are acceptable. This is an area of continuing concern that requires constant monitoring as markets evolve and environmental costs become more calculable.

6.3. *Investment.*

Investment is perhaps the most important of all economic institutions for sustainable development. The transition from less to more sustainable patterns of economic development is a process of structural economic change. It is prohibitively expensive if it is viewed as a cost function, as was done at the United Nations Conference on Environment and Development (UNCED). Viewed as part of the investment process it emerges that countless measures for the benefit of the environment are in truth economically productive. The goal of public policy must be to steer investment activity in that direction and to ensure that such investments are secure, risks reasonably calculable and the opportunity costs acceptable. This goal will involve some international investment measures of a general nature, for example a framework agreement on investment, and some investment measures that are firmly linked to a significant goal of international public policy, such as conservation and environmental management. This can be achieved by the inclusion of investment provisions in international environmental regimes. In this manner the central task of public policy with respect to investment can be accomplished, namely to balance investor rights and obligations¹⁷.

6.4. *Subsidies.*

Many developed countries have utilized subsidy schemes extensively to install the basic infrastructure of environmental protection. The WTO Subsidies Agreement reflects this experience and provides special treatment for such programs¹⁸. Such subsidies entail certain risks since they can create a situation where even economically viable environmental investments are not undertaken without subsidy. Moreover, every temporary subsidy program risks becoming permanent and thereby distorting essential market signals. In general these subsidy programs have been effective in accelerating the

¹⁷ Konrad von Moltke, *An International Investment Agreement? Issues of Sustainability*. Winnipeg: International Institute for Sustainable Development, 2000.

¹⁸ Agreement on Subsidies and Countervailing Measures Article 8.2(c)

installation of needed infrastructure and in reducing emissions faster than might otherwise have been possible.

The Global Environment Facility (GEF) is essentially a structure of subsidy for international environmental values. As such it is bound to be the object of much criticism. Yet it has become a part of the international institutional landscape of environmental management, even though its operations have contributed surprisingly little towards a possible goal of clustering despite the fact that it serves several environmental agreements as financial mechanism. The problem here lies in the differences in governance that make congruent action not as easy as it should be.

More recently, environmentally harmful subsidies in extractive industries have become a focus of attention. In practice it can be extremely difficult to determine the sustainable yield of some resources, fisheries for example, and subsidy programs that aim primarily at maintaining incomes for certain groups will result in overexploitation. Agriculture in developed countries is an increasingly uneconomic activity that can be maintained only with subsidies. Similarly it has become increasingly evident that the prices for fossil fuels do not result in the proper internalization of environmental costs. The effects are largely comparable to the effects of subsidies, although the precise level of subsidy can be very hard to calculate. The elimination of such subsidies or their more direct linkage to the production of environmental benefits represents an opportunity for environmental management and trade policy alike, but it is proving extremely difficult to achieve.

6.5. *Property Rights.*

It has long been recognized that appropriately defined and secured property rights constitute an essential element of a sustainable development strategy. Markets cannot function without clear property rights. Yet there are key environmental values that do not lend themselves to private appropriation. There is little that international environmental regimes can undertake specifically to protect property rights, other than those in goods created by international action, for example greenhouse gas emissions or property rights in tradable permits.

This is an area where the interests of environmental regimes and of the trade regime converge. Both have an interest in ensuring that property rights are well defined and adequately protected in domestic law. In practice the disciplines of the trade regime may prove vital to the achievement of secure property rights in environmental areas as well.

6.6. *Liability.*

Assignment of liability represents a market mechanism to promote prudent environmental management practices. At the same time, the existence of significant levels of liability can lead to the development of insurance markets to pool risk and thus to create private, market-driven enforcement structures. Increasingly such liability can entail parties located in different jurisdictions so that an international framework needs to ensure that it is properly assigned in specific instances that are environmentally significant.

6.7. *Innovation.*

Technology transfer is the Achilles heel of international environmental management¹⁹. Many of the difficulties encountered in technology transfer are in practice rooted in the economic value of innovation and the consequent incentive for innovators to exert close control over the utilization of innovations they have acquired rights to.

Environmental management engenders significant amounts of innovation that in turn can become the source of sustainable economic growth. Balancing private interests and public needs in this particular market has posed almost insoluble dilemmas.

Innovation is widely recognized as one of the most important motors of economic growth. At present the ability to stimulate innovation, however defined, is unequally distributed, with developing countries decidedly at a disadvantage. Intellectual property rights (IPR)—now an integral part of the WTO—are an essential aspect of innovation since market economies tend to produce less innovation where IPR are not secure. Presumably IPR systems offer the best prospects for market-based forms of technology

¹⁹ The most recent discussion in: Intergovernmental Panel on Climate Change, *Methodological and Technological Issues in Technology Transfer*. Cambridge: Cambridge University Press, 2000. Interestingly this publication does not discuss the TRIPS agreement.

transfer. Identifying the linkages between IPR and environmental technology transfer remains an important challenge for international environmental management.

7. National Coordination

For many years observers have decried the lack of national coordination of positions in different international regimes. Certainly an increase in national coordination holds the promise of promoting clustering. Yet the obstacles are significant, and are not accessible to international negotiations. The one international instrument that may be able to promote national coordination is an integrated process of implementation review²⁰.

There are essentially three obstacles to greater national coordination: domestic distribution of responsibilities; development of constituencies; and the politics of coordination. Greater national coordination can only be expected if all three factors are addressed at the same time.

7.1. Domestic Distribution of Responsibilities

The greatest obstacle to coordination is the domestic distribution of environmental responsibilities. The reasons for this state of affairs are manifold. “Environmental management” in practice involves a significant number of policy areas that share a concern for impacting the environment through changing human behavior but which exhibit widely differing problem structure. The protection of biodiversity and the management of hazardous wastes are both considered part of the environmental agenda, yet they require entirely different policy strategies. Similarly the protection of the marine environment and the reduction of air pollution are closely linked—because atmospheric deposition is a principal source of marine pollution—yet they entail quite different management structures. It is consequently quite reasonable to assign responsibility for biodiversity to one agency and for waste management to another. Indeed, even when both are undertaken from the same agency they may in practice have little routine overlap, except in agency leadership.

In addition to exhibiting different problem structure at the national level, environmental issues are subject to different levels of subsidiarity. Some issues such as land use are deeply rooted in local governance. Other issues, such as the management of watershed, exhibit regional structures. Yet other issues, such as the control of hazardous chemicals, are typically of national concern. Finally some issues, such as atmospheric pollution, can be addressed in a variety of ways depending on the degree of centralization or decentralization that is typically preferred by a country. With such a variety of possible approaches it is hardly surprising that every country has an essentially unique pattern of responsibilities.

The environmental agenda grew incrementally, sometimes over a period of decades. In most developed countries the roots of water pollution control and the management of industrial facilities reaches back into the 19th century. Biodiversity protection on the other hand is an issue of the last decade of the twentieth century. The notion that “the environment” as a whole requires integrated management did not emerge until the 1970s. Countries responded differently to these changing perceptions. While most countries, with the signal exception of the United States and Russia, have cabinet level environment ministries, none has one that encompasses all aspects of the environment as it is now understood.

The traditional approach to a need for coordination of national positions in international for a is to assign responsibility to the foreign affairs agency. This is possible where the issues concerned do not involve changes in domestic legislation and the responsibilities of subnational units in a federal system. In those instances, foreign affairs agencies have few of the needed skills to balance international needs against domestic regulations and priorities. In many countries this has led to wholesale delegation of international responsibilities to the various environmental agencies. Coordination may be better in countries where that has not occurred but at the price of poor integration with domestic policies.

²⁰ See above.

7.2. Constituencies

The adoption of an international environmental agreement almost always engenders the emergence of a complex regime that includes many actors beyond the states party to the agreement. Several groups from civil society are typically involved, including scientists, industry and commerce and advocacy groups of all kinds. Even government agencies other than those primarily responsible for an issue can find themselves involved indirectly. This phenomenon is one of the most important sources of effectiveness of international environmental agreements, since it permits the regime to establish deep roots in various countries.

The existence of these constituencies can become a significant obstacle once there is a call for “coordination. Moreover these constituencies are not readily influenced by the international negotiation and are frequently in a position to create roadblocks to the process.

In some instances there are also phenomena of bureaucratic clientism, in the sense that each bureaucracy has a commitment to “its” international regime, which it views as a vehicle to advance its own agenda, both internationally and domestically. Frequently it is the international dimension that enables the agency in question to attract policy attention from the highest levels of government, and the prestige and resources that can flow from that.

7.3. Politics of Coordination

Domestic coordination carries a price. A government that engages in a domestic process of coordination must make hard decisions, at least in the sense of decisions that may displease some constituency or another. Such decisions carry an immediate political price since it involves a clear declaration of government policy in one form or another.

Once the government in question reaches the international level, with its carefully coordinated position, it finds that it is but one voice among many. Only very few international actors are able to impose the domestically established compromise on the international process. This has been true even of the United States when it comes to

environmental policy issues. Moreover such actors are the most unwelcome of negotiating partners since they are liable to present their domestic positions on a “take it or leave it” basis, being unwilling or unable to engage in real negotiation. In other words governments that have carefully coordinated positions are less likely to engage in productive negotiations.

8. How To Begin.

The first—and the last—step are the hardest parts of any policy process. The risks are greatest when the first step is taken; and the negotiation process will typically leave the most difficult decisions to last. For this reason every international negotiation—and clustering is unquestionably first and foremost a negotiation process—needs “champions,” countries that have an interest in promoting a certain outcome and are willing to invest some political capital in achieving it. Only the existence of such champions enables international negotiation to lead to outcomes that represent not simply the lowest common denominator of the countries involved. Clusters will also need champions.

The burdens of being champion are such that most processes require no more than a single champion. When more than one appears this is mostly due to domestic considerations, that is more than one government feels a need to appear as a champion of an issue at the international level, than of the negotiation itself. Within most negotiations countries are willing to ally themselves with a champion once he has been identified. This reduces the burden of leadership.

Traditionally the country where a secretariat is located has been viewed as the natural champion of a given regime, with the exception of Geneva and New York, which are seats of the United Nations and viewed as relatively neutral in character. One of the problems that UNEP faces is that Kenya is not an effective champion of its interests in the international system. This is one of the reasons for the current dispersion of secretariats. When it comes to clustering this can be viewed as an obstacle. Indeed, clustering inevitably involves several secretariats, which are currently dispersed and

therefore involve several countries. A country that hosts a secretariat will be suspected of wanting to relocate other secretariats when it champions a process. This paper has argued that relocating secretariats is not an essential aspect of clustering, so a country that hosts no secretariat involved in a cluster may actually have an advantage as champion in comparison with a host country.

The essential first step in clustering is consequently the identification of champions for various clusters. The existence of several potential clusters suggests that several opportunities exist for championing a cluster. Without such champions, none of the clusters are likely to become reality.