

“A World Environmental Organization?”

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A World Environmental Organization?*

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Abstract

We evaluate possibilities for a new World Environmental Organization (WEO). Our discussion is motivated both by recent calls for such an organization in light of WTO trade and environment conflicts and the relative absence of internalization of global externalities. We propose an organization building upon the idea of facilitating Coasian deals on the global environment. This contrasts with attempts to agree on a statement of global principles, as in the Rio declaration and Agenda 21 as the main vehicle for global environmental improvements. We indicate how such a WEO might help restrain various impediments to internalisation, including free riding and property right ambiguities. Developing country interests and concerns with such a proposal are also discussed. We conclude by arguing that a WEO can offer joint benefits; raising environmental quality for those willing to pay for it, and acting as a vehicle for securing resource transfers in return for environmental commitments.

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1. INTRODUCTION AND SUMMARY

This paper discusses a concrete proposal for a new world agency on the environment aimed at improving environmental quality through bargained deals on the environment. Just as the GATT/WTO tries to liberalize trade in goods and services by removing border impediments on trade through negotiated exchanges of trade policy concessions, so we argue that a World Environmental Organization (WEO) should focus on removing impediments to bargaining (and trades) on the global environment. Exchanges of commitments on forest cover, maintenance of coral reefs, species management, biodiversity protection and other environmental concessions in return for cash, policy change (trade policy changes, for instance) and other considerations could all fall under the bargaining umbrella of a WEO. If bargains were struck, the result would be improved environmental quality and transfers of resources for developmental purposes to poorer countries who, in the main, are custodians of these assets.

As such, the paper departs sharply from recent calls for a WEO linked in one way or another to the trade and environment debate now embroiling the WTO. Calls have come from high levels in the WTO for a new forum where environmental issues can be discussed away from the WTO, from researchers and others who have suggested an arbitration agency to resolve conflict between WTO commitments and those in environmental arrangements, from Prime Ministers and advisers to Presidential candidates who suggest the need both for a strengthened and consolidated global environmental agency, and an agency to oversee present international environmental treaties and other arrangements now in place.

We suggest that this debate does not focus on central or substantive environmental problems, but instead deals with tangential issues through proposals, which are anyway likely to be inconsequential in impact. We see the central global environmental problem is the relative lack of internalization of cross border and global externalities. This raises the issue of how we design mechanisms to achieve these goals, rather than seeking out mutually agreed statements of principle of what constitutes sound environmental management in the tradition of sustainability, the Brundtland Report, Agenda 21, and other related documents. The WEO we propose is in this spirit.

Our starting point is Coase (1960), and the relative lack of Coasian deals to internalize externalities at the international level. Such a WEO could be designed to cover all externalities, both those within as well as across countries, although our focus is on cross border externalities since within country externalities can in principle be dealt with by domestic initiatives alone. Our proposal is for an institutional form that seeks to achieve internalization internationally, and that does this by better facilitating Coasian deals. Reducing incentives for free riding, and allowing for verification of completion of contracts, acting as a financial guarantor we see as two key elements.

A WEO as we propose it is some distance from the WTO. While the latter is also a bargaining framework, it is more restricted since no cash is involved and the rules of the WTO Charter (via GATT 1994) constrain bargaining (such as the MFN rule). Also, its initial focus was on preventing a reversion to the regime of the 1930's in the post war years, as well as further liberalizing through negotiated exchanges of concessions, more so than reducing barriers to the successful conclusion of bargaining. We evaluate both the rationale for and possible organizational form of such a WEO in light of experience with the WTO, and its implications (both positive and negative) for the developing countries.

We see good reasons for consideration of a possible World Environmental Organization at this time, even though the immediate demand for it may appear limited. An organization of this type can help focus debate and marshal support for new environmental action, and can also counterbalance the institutional presence of agencies in non-environmental areas, such as the World Trade Organization (WTO). Through bargained deals it can achieve both environmental quality improvements and new resource flows to developing countries. But more than anything else, our argument is that discussion of the global environmental regime for the last 15 or so years has been focussed on an elusive search for principles to guide the global regime (sustainable development and Agenda 21), rather than on the search for operational mechanisms that actually improve environmental quality through incentive based mechanisms.

We suggest that there are two key elements to the present global environmental regime; a set of international principles (somewhat short of a treaty) embodied in Agenda 21, and a series of around 170 largely issue specific environmental treaties. A small number of more recent treaty arrangements (Montreal and Kyoto Protocols) move in the direction of internalisation but still

fall short. We argue that within the statement of global principles and the patchwork quilt of issue specific, science driven, global and regional treaties that largely define the global environmental regime, narrow topic non side payment negotiations have spawned shallow treaties under which opportunities for achieving more major joint gains from cross country internalization of externalities have not been realized. Few mechanisms which guide and focus efforts to internalize those externalities which underly global environmental failure have emerged. Devices to remedy free riding, time inconsistency and other problems have not evolved. Our argument is that these failures of mechanism design and international negotiation can best be corrected using a new agency aiming to internalize global externalities through innovative and aggressive environmental deal making.

In our view, global externalities go uninternalized for a number of reasons. We cite free riding, ambiguous property rights, time inconsistency, and contract enforcement as four central reasons. We suggest that weakening their impacts on incentives to bargain should be at the heart of the global environmental policy regime, and that we should move away from enunciation of ill-defined principles or the setting of lowest common denominator scientific standards in area specific treaties as at present through the pursuit of bargained solutions. We see a new WEO as facilitating and completing the deal-making on environment that the global economy urgently needs to raise environmental standards through internalization. Such a new body could also help to address some of the problems of inter country coordination, enforcement, and lack of incentive structure which hinder effective international environmental cooperation at the moment; although such impacts we see as secondary to the achievement of bargained outcomes.

While we see a WEO as playing a role in achieving improvements in all of the areas of deal making we list above, broader deals may be also possible. Issue linkage in negotiation between environmental and non-environmental areas is one, since these probably require a level of coordination across sub areas and regions that is currently difficult to imagine occurring without agency support. We also note the opportunities that may exist for countries experiencing difficulties in implementing their own domestic environmental policies to use the political support of an international entity (through a WEO) to achieve their objectives. Our present global economic institutions still reflect their 1940's origins, and focus primarily on trade and finance as the dominant economic linkages between countries, rather than physical linkages. While there are now a range of issue-based as well as more generic international institutions on

the environment, they are weak partners to the post-war Bretton Woods economic institutions. A more centrally focussed global environmental agency, working on the central problems seems to be the way forward.

We see potentially substantial gains for developing countries from active participation in a WEO of the form we outline, especially since a WEO can act as a focal point for developing country coalitional formation in negotiation. Given that they are significant custodians of environmental assets, deals struck in a WEO could fuel a major resource transfer to the developing countries in return for strengthened environmental regimes in their own countries. These transfers will be larger if developing countries bargain jointly, rather than as single countries. In some cases, improved environmental management may be something that developing countries anyway want to achieve; in others, they may be concerned that firmer environmental management may slow their growth and development. The opportunity to secure significant financial transfers by bargaining within the WEO seems both real and concrete; and the benefits of bargaining jointly are almost certainly large.

But we also highlight reasons why developing countries might be cautious about such a proposal. The issues would seem to be whether any advantages to them would be large enough to significantly contribute to development, whether a pressurizing agency along World Bank/IMF lines could result, and the extent to which growth and development might be slowed by taking on environmental commitments. We see caution towards a WEO as a likely initial developing country response, and one which has to be clearly acknowledged, but we would argue that the potential gains remain. We also highlight the heterogeneity of both interest and circumstance across individual countries, further complicating the developing country reaction to any WEO proposal.

With all proposals for major institutional change the catalyst to change is often particular events rather than the stating of the proposal itself. For now the catalyst behind a WEO seems to be a trade and environment conflict in the WTO, but this we think may change. Major global environmental damage in the next few years which cooperation might have mitigated could prove to be a more powerful catalyst, if and when it occurs. Entities such as the WEO also sometimes evolve out of small beginnings, and only slowly grow into full form. Time will only tell whether the institutional structure we suggest here begins to emerge from the present global

environmental regime, or whether radical response to external shocks ultimately proves to be the driving force.

2. BACKGROUND TO A WEO

Global institutional design in the environmental arena is something that has recently come into major vogue. Calls for a WEO have all been made in the last 18 months by the WTO Director General Renato Ruggiero, the French Prime Minister, Lionel Jospin, and Gore's Economic Adviser Laura Tyson. The Ruggiero's proposal is, in effect, for a new forum for global environmental discussion away from the WTO. Jospin's proposal is that the presently weak United Nations Environmental Programme (UNEP) be replaced by a stronger WEO. Tyson's proposal is for an agency to oversee enforcement of existing environmental treaties. These calls reflect a number of factors. One is trade and environment conflicts in the WTO, with a WEO seen as a way of potentially resolving them. Another is the seeming lack of a global environmental agency with sufficient presence to counterbalance the WTO.

However, despite these calls, there has been great caution expressed about these WEO proposals. Global organizations, such as the UN, the World Bank, IMF, WTO, are seen as too numerous; potentially captured by their own corporatist self promotion; and in the eyes of some economists even as inessential, since whatever cooperative behaviour they induce could probably be generated by the parties involved without the institutional presence. WEO proposals are seen as either vague, or lacking in substance. Dispute settlement provisions specified within treaties is the way they are usually enforced, for instance, not by some agency set up subsequently. Also, developing countries fear an expansion of the World Bank/IMF structure which they see as pressuring them via conditionality, and they also fear a WEO will not deal with their agenda of issues.

Our advocacy of a WEO is different from other current calls, and stems from our characterization of the present global environmental regime as a failure relative to the objective of internalizing global environmental externalities and raising global environmental quality. The relative lack of internalisation is the deeper problem to which, we suggest, that a WEO should be addressed. We see the present regime as consisting of two separate parts, neither of which centrally attacks internalization. The first involves an enunciation of broad principles for global

environmental management, which found its high point in the Agenda 21 and the Rio Declarations which emerged from the 1992 Rio summit. These principles reflect an attempt to build a global environmental regime based on declarations, not on operational mechanisms, and do little to provide concrete mechanisms to achieve improvements in environmental quality through internalization arrangements.

The second consists of *ad hoc* environmental treaties signed by various countries or country groups. Our count is that there are approximately 170 separate international environmental treaties (either global or involving subsets of countries) that cover a range of issues and agents. These include sharing of research; binding commitments on the use of instruments and emission levels, regional as well as global agreements, property right type agreements, as well as joint emission reduction agreements as in the Kyoto protocol.

In our view, however, most of these reflect lowest common denominator outcomes from narrow areas of environmental negotiation. They are typically without side payments for those adversely affected. Most treaties reflect environmental concerns of developed rather than developing countries; and there are few if no inter developing country treaties. While more recent arrangements such as the Montreal and Kyoto protocols clearly move in the internalization direction we suggest, the extent of internalization generated by all of these treaties taken as a set is limited at best. Packaging these treaties together so as to allow for joint and more major concessions in the environmental area, in return for, say, concessions in non-environmental areas (such as trade) is also difficult. We are not the first to point this out. Both Susskind (1994) and Haas, Keohane, and Levy (1993) make similar arguments about the substantive content of these treaties.

Having characterized the present regime in this way, and argued that it fails in the central objective of internalising global environmental externalities, the natural question to us to ask is why are these global environmental externalities not being internalized, and what can be done to achieve this. If gains from internalization are jointly shared and are substantial, why are custodians of assets not able to agree to manage and conserve assets in return for payment by those who benefit from such practices.

We suggest the reasons for limited internalization in the global environmental regime are multiple. The first is that it is difficult for negotiations between groups who have an interest in the management practices used for environmental resources to be put together. Governments can negotiate with each other on, say, species, but if loss of species occurs due to encroachment of poorer rural dwellers on forests under population pressure, governments may not have direct control of the biospecies resources under negotiation. They may be able to assert that control through the use of force to expel intruders, but if it is the poorer segments of society that are involved, it will be politically difficult to do so.

Equally, in OECD countries, there may be a willingness to pay for environmental protection in poorer countries, but any attempt to estimate this (by survey methods, for instance) will fall foul of free riding. One individual will be unwilling to contribute if they benefit from everyone else's contributions. The benefits of environmental protection abroad are a public good, which from the theoretical literature we know are extremely difficult to finance.

Another problem is that individual countries also can free ride on the environmental quality improving actions of others, and so countries will hang back from multilateral negotiation in which they need to pay a price to achieve environmental quality improvements that others will benefit from. Free riding between countries has long been identified as a major impediment to environmental negotiation (see Barrett (1994)), for instance). The transactions costs of striking global environmental deals can thus be large; putting together a realistic country offer of willingness to pay for another country's environmental improvement is a difficult task.

Enforcement of contracts entered into is a further problem along with related time inconsistency problems. OECD countries may strike deals with countries to meet environmental targets such as forest cover, or species populations over a period of years. But if payment for these concessions takes place immediately, more money could potentially be repeatedly requested for environmental compliance. However, if payment is postponed until the end of the agreement, countries who conserve environmental assets have no assurance of being paid. How determinations are made as to whether or not environmental commitments have been met and on what basis they are made becomes critical to the successful conclusion of such deals.

These and other problems we see as all impeding the internalization of global externalities, and the driving force for a possible WEO under this view of the world is to weaken impediments to global deal making on the environment, and hence secure the joint gains from global internalization. Agenda 21 and existing treaty arrangements are not designed to move the global economy towards full internalization of environmental externalities. The role we see for a WEO, is to achieve exchanges of concessions between various groups (countries, NGOs, citizen groups, companies (or groups of companies)) on environmental issues. These would be in the form of environmental commitments (for example, a commitment by a government that a specified fraction of land would remain under forest cover for a certain period of time) in return for other concessions (such as cash). There would be procedures to determine whether or not compliance had occurred with the commitment, procedures to hold funds pending such determinations, and procedures to package proposed deals so as to reduce incentives to free ride during deal making.

As a bargaining framework, a WEO has some similarities to the WTO, a trade bargaining framework for multilateral trade rounds, but there are crucial differences. It is simply an umbrella under which interested parties are gathered and encouraged to negotiate. In the WTO, trade concessions are exchanged through mutual extensions of market access; no cash changes hands. Also, in the WTO, negotiations take place within a rule regime (the articles of GATT 1994). In a WEO, since many global environmental issues have the character that one group of countries has custody over several groups of assets and others do not, deals will not proceed without cash transfers. Thus concessions by some countries may be heavily in the non-environmental area, as one group of countries pays another to manage resources better. In a WEO structure, no rules or statement of rights and obligations are needed.

2.1 Internalization of Externalities

The theory of externalities which underpins the form of WEO we propose rests on two central contributions in the literature. Pigou (1924) argued that uninternalized external effects in either production or consumption produce additional social costs which do not appear in private agents calculations. In such cases, he argued that a tax which equates marginal private and marginal social costs will internalize the externality; because private decisions become coincident with appropriate social decision making. Thus, with cross border externalities such as acid rain, the emitting country (or more precisely, producers in the emitting country) needs to bear not only

their own costs when they produce energy, but also the added costs they inflict on users of lakes outside the country. If these added costs are part of their production decisions the externality is internalized, and Pigou suggested the way to do this was with a special tax set equal to the difference between marginal private and marginal social cost.

Later, however, Coase (1960) was sharply critical of Pigou and suggested that bargaining between the parties to an externality would serve to achieve internalization; no special tax was needed. To make his argument Coase first expanded on then current thinking on externalities and argued that the issue of who should pay the additional costs of internalization (or pay the internalization tax under Pigou's approach) was a matter of property rights; who has rights to do what. But once property rights had been established, Coase argued that bargaining between the parties to an externality would serve to internalize the externality, with payment of compensation for damage to those having legal rights to pursue redress, and payment to induce reduction of damage by those parties having no such rights. Coase also pointed out that economic analysis is silent on the issue of who should have these rights. Thus, in the acid rain example, do emitters have rights to produce energy, and so lake users must bribe emitters to reduce their emissions; or do lake users have rights to uncontaminated lakes, and emitters must compensate lake owners for emissions made at various levels. The lake example may seem clear, but Coase argued that for many externalities it is common that there will be ambiguity as to who has property rights.¹

Coase also argued that in the presence of an externality, bargaining (or Coasian deals) may have already taken place, and in ways which either wholly or partially internalize the externality. He argued that use of a Pigouvian internalization tax where Coasian deals have already been entered into could be counter productive and even worsen resource allocation. To be fair to Coase and for the purposes of our discussion here, his focus was on narrowly focussed external effects within national economies where bargaining could either be realistically envisaged or shown to have occurred. He did not discuss transnational or global externalities affecting millions or billions of people, and for which the transactions and other costs of generating bargaining solutions would be much higher.

¹Coase also argued that the assignment of property rights would only be a matter of income distribution; it would not otherwise affect the outcome under internalization. Dolbear (1967) later showed that this will only hold under special conditions.

This Coasian discussion of externalities has subsequently become central to the thinking of economists on externalities, but enthusiasm for this approach is less widely shared by non economists. In practice, the extent to which Coasian deals actually take place seems somewhat limited. Coase's examples of railway engines setting fire to farmers fields, and dentists making noise when they drill do not so easily extend to large group externalities, such as congestion. And for a WEO, property rights may not be fully clear before a negotiation starts.

Despite these qualifications, the relevance of these two contributions to our discussion here of global environmental arrangements is that attempts to design a present day global environmental policy regime seem to ignore internalisation as an approach. We have no global environmental entity whose main purpose is the internalization of transborder and global externalities, and seemingly nothing which articulates mechanisms through which improved internalization is to be achieved. What we have instead are the widely espoused principle of sustainable development, and a network of environmental treaties which has evolved in a largely *ad hoc* manner. Some are global, some are regional. Most have evolved from scientific process; identifying harmful substances, and setting acceptable levels for emissions; with effectively no side payments or compensation in these treaties. Because many of the key global environmental issues (forests, species, for example) are unidirectional with damage originating in one group of countries and affecting other countries; the outcome of such narrowly focussed treaties has typically been lowest common denominator and often minimal. Bargained deals in the spirit of Coase have not been encouraged, and only lately begun to emerge in the Montreal and Kyoto protocols.

Restating the argument, the international institutional architecture reflected in the present global environmental regime, and some 30 years in evolution, does not take as its starting point the design of mechanisms which seek to achieve internalization of environmental externalities across countries. There is no agency that attempts to achieve Coase's internalizing deals across countries, that recognizes the many problems in deal making to improve environmental quality (such as defining property rights, time consistency problems, allowing side payments, enforcement and compliance with environmental commitments, free riding, and collective decision making under willingness to pay). The modern economics literature shows why private negotiation cannot easily complete the deals needed for international environmental internalization, why intermediary agencies are needed, why scientific standard driven

arrangements produce only low level environmental outcomes; in short, why a new global agency for the environment is needed.

While reductions in carbon emissions and international transactions in tradable permits are part of more recent global environmental treaties (the Kyoto protocol), they still remain some distance from the global internalization proposal we make here. They are a vehicle for implementing globally agreed emissions reduction targets by country which allow the emissions reduction to occur through the lowest cost providers; an efficient form of implementation give the agreed targets. This structure certainly moves in the direction we advocate; but what we suggest is a more comprehensive approach to global internalization through the design of deal facilitating mechanisms, including bargaining across a range of environmental and non-environmental considerations. Similar comments could be made about Kyoto related innovations, including Joint Implementation and projects funded through the Clean Development Mechanism²; that they move in the right direction but still are short of full Coasian deals.

3. THE OBJECTIVES OF A WEO

We see a series of objectives for a WEO, all reflecting the theme that an internalization failure exists in the global environmental area, and that this can best be remedied by providing a new global institutional arrangement for bargaining as a way of achieving a higher degree of internalization. In simple terms the objective would be that those who have custody of assets should, through bargained deals, be able to get those abroad who have high value over these assets to pay for higher standards of environmental management. The results should be improved environmental quality and transfers to custodians of assets, many of whom are in poor countries. We do not claim that such an innovation will fully and immediately achieve complete internalization, but we do think that significant improvement on the current situation is possible.

The central objective for such an organization would thus be to facilitate cross-country deals on environmental issues with the aim of raising environmental quality. These deals are in our view unachievable with present institutional arrangements, and these arrangements have proved

²For more on these instruments see Grubb et al (1993), and Newell (1998).

themselves inadequate to the task. For a WEO to do this, a variety of impediments to such deals have to be addressed, including property rights ambiguities, free riding, and verification and enforcement of contracts. We would also see a series of spin off benefits that can also be realized from meeting this central objective, such as underpinning domestic environmental policies, and particularly so in developing countries.

The creation of such an institution presupposes sufficient political demand being in place for it, that it is believed that it will perform a new and key function in improving global environmental quality, and different from that already motivating existing institutions. Our purpose here is to sketch some possible functions of and forms for such an institution, rather than to indicate the precise political process through which it may come about, although with joint gains stemming from its creation we would argue that it should have positive momentum. If established, it would also likely partially shape the future agenda of global environmental politics. Depending on the scope, mandate and powers of the institution, a variety of coalitions could emerge in supportive, or even veto, roles (Porter and Brown, 1996).

3.1 An Initiator for Cross Country Internalization Deals

The central function we see for a WEO is to act as a catalyst in generating internalization deals between countries (and/or groups of agents within countries) on global environmental issues. Deals would involve verifiable environmental commitments being exchanged for various considerations, including cash. The deals involved could be government to government deals of various kinds, or involve private sector agents in various ways (companies, representatives of community groups).

Thus, the government in country X with no rainforests, might strike a deal on behalf of its citizens with the government of country Y with rain forests to the effect that, say, a specified fraction of land in country Y would remain under forest cover for a specified time period (20 or 40 years, say). In return for this commitment, the government of country X would pledge to transfer a sum of money to country Y at the end of the period. The commitment would need to be verified in some way, and country Y would need to achieve on its residents. This could be through logging bans, export taxes on logs, logging licences; or other internal arrangements.

Alternatively, a group of concerned citizens in country X could negotiate independently of their national government with a community group having custody of an environmental resource in country Y. They might again agree to a transfer of financial resources directly to the group at the end of a time period if a particular environmental target is met (again, say, forest cover). Issues of verification and compliance would also arise in both cases.

To be most effective deals would likely span groups of countries with similar interests in the environmental resource. Countries or country groups trying to deal on their own would encounter the free riding problem, that some of the benefits of the deal would accrue to others. Deals made by only subsets of affected parties would be ever more minimal in impact as the fraction of the total global benefit accruing from the deal falls. A strength of the WEO proposal is its ability to orchestrate simultaneous deals across groups of affected parties so as to both maximize the degree of internalization through the deal and to reduce free riding.

Deals in other areas would follow a similar structure to those set out above for forests. For species, the target might be in terms of species populations by a specified target year. For biodiversity, it might be in terms of access to undisturbed lands guaranteed over a period of time. For coral/oceans, it might be in terms of the portion of unimpaired coral in coastal waters. For carbon emissions, it might be in terms of a maximum emission level from the country over a time period, or (as in the Kyoto protocol) as cutbacks from emission levels. In water, where there are international disputes over flow rates through territories and water quality indicators, these can be bargained in return for considerations as above. Toxic waste commitments could be bargained in terms of annual levels of discharges. All these would constitute implementable and verifiable environmental targets, and could be bargained in a WEO for a consideration.

While some of these commitments are currently covered by treaty arrangements of various forms, a WEO would allow deals to go considerably further, and as such there seem no conflicts with existing treaties. If new WEO deals go beyond what is in treaties, the treaties simply become redundant. If WEO deals do not measure up to treaty arrangements, they will not be concluded.

The bottom line is that internalization in these areas will imply that those agents who are the source of global environmental damage should more fully take into account the costs of the damage they create through their own private decisions on others abroad. Species and forests

will be protected in the interests of foreign consumers, who in turn will pay for environmental quality improvements. Carbon emitters will take into account the costs incremental climate change inflicts on others; deforesters will take into account the incremental loss in global amenity value and habitat loss to others. These costs will be passed on to the originators of damage, compensation will be paid to receivers of damage; funds will be paid to emitters to cover the costs of environmental restraint. Explicit bargained arrangements involving both governments and non-governmental groups will reflect negotiated Coasian deals.

3.2 A Weakener of Impediments to Internalization Deals

A central aim of a WEO is to weaken impediments which currently exist to internalization deals on the environment. It is often pointed out both that side payments do not occur to any significant degree in existing inter country environmental arrangements, and that financial resource transfers from OECD countries (where demand for global environmental quality is high) to lower income countries with significant endowments of environmental assets are small, and do not take place on a regular basis. If they occur, it is usually as a result of a country being a signatory to one of the global treaties such as the Framework Convention on Climate Change, rather than as a negotiated environmental deal focussed on internalization. This WEO proposal explicitly aims to get resources flowing in the global economy so as to secure improved global environmental quality.

The relative absence of negotiated arrangements which underpin environmental arrangements seem to have occurred for good reasons. One is time consistency with the implementation of environmental deals. If, say, Brazil were to promise to restrain deforestation over, say, 40 years in return for financial inflows; then if the funds were paid immediately Brazil could request more funds after the initial receipt. But if funds were paid at the end of the period, Brazil would have no assurance that payment would be forthcoming. Also, an arrangement entered into by one government may not be honoured by a later government which is either unwilling or unable to fulfil the terms of the agreement made to another state. For these and other reasons, some form of intermediary guarantor of Coasian deals seems needed by both sides to reduce the risks involved in bargained environmental transactions. A WEO can act as such a guarantor by receiving funds for deals agreed to and holding them in escrow, pending execution of the commitment. If the environmental target is deemed to be met, funds would then be released to

the country or group making the commitment, and if not returned to the country or group pledging the funds.

A second reason is problems of verification and compliance. Who ensures that a pledged environmental target has actually been met, and what are the remedies if this is not the case? To help advance things in this area, WEO staff could monitor compliance on environmental commitments, and make determinations of whether or not commitments have been met. These, in turn, would require undertakings from parties to deals monitored by the WEO to accept WEO determinations, and a system of dispute resolution and appeal. A set of agreed procedures for verification would be needed.

A third problem area is free riding. If countries, or groups within countries, have existence value over Brazilian forests and if bargained environmental deals were bilateral, countries could free ride on each others deals, since the benefits to the deal accrue to countries rather than those that are party to the deal. Free riding greatly undermines the ability of environmental deals to be struck at a global level, since the benefits of any pair of bilateral actions are spread much more widely; all OECD countries may benefit from a species population target negotiated in, say, Cameroon by, say, Germany (or a German NGO). A WEO can help countries capture the benefits to others from free riding through multilateral rather than bilateral deal making; with packages of environmental deals being put together in negotiated rounds, much as the WTO utilizes the cross-overs of benefits in one area and costs in others in allowing countries to conclude mutually advantageous deals on trade barrier reduction. A WEO can even aggressively seek out deal making opportunities by proposing a package of deals to consortia of interested parties, and in this way reduce free riding benefits.

Finally come difficulties in putting together the coalitions for deal making aimed at reducing transactions costs. Often it is difficult to determine the benefits from deals, and hence who should be approached with deal making proposals. Preferences underlying deals need to be estimated and represented; and revealed willingness to pay measures are hard to put together. Parties to deals typically have little information on what deals may be worth to other parties, and hence how to negotiate. Who assesses and acts on behalf of the collective willingness to pay in OECD countries for global environmental improvements? If it is to be national governments, how they are to do this and with what effect? A WEO can also play a key role here by

undertaking studies, producing willingness to pay estimates for enhanced global environmental quality, setting out scenarios for deals, and orchestrating and stimulating the process with information.

3.3 Extending and Deepening Treaty Commitments

Although we would see other possible activities for a WEO as supportive rather than core, they could also bring benefits. One activity for a WEO might be to bring all existing cross country environmental treaties under a single umbrella, with the idea of adding transparency, and broadening and deepening of existing commitments. New exchanges of environmental concessions across areas might also be possible as a result of this. Commitments in the form of binding standards, for instance, could allow for exchanges of environmental concessions, much as in the WTO. More innovative treaty arrangements might also allow for more progress to be made on the issue of side payments, which has long bedevilled international environmental agreements. It is possible that side-payments under a centralized and expanded Global Environment Facility could even be further developed. By creating multiple systems of obligations and cross-referencing commitments, more cooperation between parties might be achieved, and incentives to free-ride reduced.

A WEO could also provide information, so as to avoid unnecessary duplication in environmental negotiations and speed negotiations. For example, rather than having a forests protocol as part of a Climate Convention as some commentators have suggested (Sebenius, 1994), it may make more sense to have forest negotiations coordinated by a WEO and avoid repetition of debates that have already taken place in negotiations towards a Global Forests Convention. Hence, a WEO could initiate the process of rationalizing institutional functions.

3.4 Facilitating environmental/non-environmental policy linkage

By bringing global environmental arrangements under a single umbrella, a WEO should also make it easier for cross country concessions to be exchanged between environmental and non-environmental areas, potentially leading to both a stronger environmental regime and gains elsewhere. Thus, developing countries might make concessions on their environmental management in return not only for cash but also for improved trade access (say, in textiles and apparel). A problem in making such concessions is how to do this within the existing patchwork

quilt of global environmental arrangements, and by systemizing these a WEO could facilitate bargains of this kind.

A WEO can thus be seen as a parallel and expanded bargaining framework for country and group concessions. The WTO involves bargaining concessions on trade barrier reductions and bindings, but no cash is exchanged and only national governments may bargain. The WEO goes further; cash for commitments is allowed, and bargains are not restricted to national governments. Linkage to non environmental issues, while a second or third step, in effect argues that bargaining need not be restricted to cash compensation for environmental commitments; a wider forum for global bargaining could evolve from the WEO, encompassing both the WTO and whatever issues groups want to exchange concessions on.

Developing countries have been cautious over such bargains, arguing that they should be compensated for undertaking environmental restraint of the form sought by OECD countries, and fearful that a willingness to bargain indicates both a relaxation of this position and, implicitly, a concession on property rights. But by providing institutional support for bargaining across issue-areas, incentives to cooperate would be multiplied, and the basis for global environmental cooperation significantly broadened. Permit trading, where there have been attempts to develop credit systems for rewarding sacrifices and encouraging compliance, and debt-for nature swaps both demonstrate the precedents for cross-issue linkages.

3.5 Using an international structure to underpin domestic environmental policy

An international environmental entity such a WEO could also usefully lend support to those domestic groups (including NGOs) trying to raise levels of compliance with domestic environmental laws. Government in countries with such problems may be able to use the WEO as a masthead which politically supports domestic policy change in the environmental area.

A WEO might also consolidate the information clearing-house functions of the Commission on Sustainable Development, which collects and reviews information about parties' fulfilment of their obligations and build a wider range of information sources again underpinning domestic policy. It could also help build institutional capacity in less developed countries based on a recognition that in the past compliance has been hampered by administrative weakness and poor institutional infrastructure.

A WEO could also take a broader view of global environmental policy perhaps assessing whether gains in one area might be likely to be offset by losses elsewhere. It could, for instance, try to ensure that national plans to combat climate change, desertification and deforestation for instance, were coordinated and linked to efforts to address more localized problems; different from the current implementation of environmental agreements, where a laissez-faire approach is adopted as to how countries choose to enforce their commitments. Again stronger domestic support for environmental bargains might be the result.

3.6 *Property Rights and WEO Environmental Deal Making*

A key set of impediments to global environmental deal making are the ambiguity often involved with property rights in the global environmental area. Ambiguities can be both cross country, and within country. Across countries, national governments assert their implicit rights to regulate and protect economic activity, involving different claims over environmental assets. OECD countries often argue, for instance, that the forests are the lungs of the earth (globally communal property) and thus they have rights to, say, block imports of tropical lumber until improvements in environmental quality (forest cover targets) occur in exporting countries. Developing countries with forest cover argue that this is eco (or green) imperialism which forces them to slow their growth and development, and yields environmental benefits mainly to wealthy countries. They instead argue they should be compensated for showing environmental restraint over the use of their own environmental assets. The property rights issue is whether forests are a global or a national asset.

Within countries, there are also substantial ambiguities as to property rights over environmental assets. Some countries have multi-level government registration of ownership (national and provincial) which produces conflicting claims, which courts often do not adequately resolve. Native peoples have rights to biospecies, even if formal land rights are held elsewhere. Squatters, in some countries, exert *de facto* property rights over species, forests, and biodiversity.

For a WEO, this all raises difficult questions of who is to deal with whom to generate environmental quality enhancing deals. Coase argued that clear assignment of property rights is needed before any environmental deal making occurs, and a central task for a WEO is to help to clarify property rights to facilitate such deals. This will not be not easy, although some cases appear more straightforward than others. Where multiple land registration schemes operate, a

WEO can help simplify and consolidate them. Where non-timber rights arise, a WEO can codify them and bring them in as part of the deal making. Across countries, a WEO could accept that *de facto* rights devolve to the country with assets on their territory, and short of invasion, bargained compensation would seem to be the only practical way forward, although this involves effectively ceding currently contested property rights over environmental assets in developing countries. The operational principle, in the absence of clear international courts with authority to rule on such rights, would seem to be that custody of assets yields ability to bargain. Bargaining becomes more satisfactory as an internalization device, the more secure the custody is.

Some environmental conflicts at international level are themselves primarily about property rights. Water conflicts, where one country controls the headwaters which flow to other countries further down the river, are one. Here negotiated deals, say to maintain water flow relative to target levels in return for other concessions, can be WEO brokered deals.

We do not suggest that a WEO could definitively resolve all international property rights issues, which Coase anyway suggested were outside of formal economics and rest on arguments of natural justice. But the aim would have to be both to contribute to the alleviation of some of them and to work with *de facto* rights through custody of assets. Property rights related problems partially explain why cross-country deals on environmental issues have been science based lowest common denominator in outcome, rather than Coasian in character, and why property rights issues would have to be a part of WEO activity. Documenting existing overlapping and inconsistent property rights where they occur may help resolve the situation. Suggesting ways to proceed where property rights are contested may also help.

In sum, then, a WEO could undertake activities that underpin Coasian environmental deal making on a global scale. It would have no power to conclude deals; these would be for national governments to decide on; but proposals for deals, mechanisms to support deals, arrangements to enforce deals; all would be the bailiwick of the WEO. The central aim would be to redress failures of international negotiation over the years in international environmental policy making that moves the global economy closer to achieving fuller internalization of global environmental externalities.

A WEO could act as an intermediary on deals of the type sketched above, receiving and holding funds until determinations are made as to compliance (with either transfers to the custodian country, or return to the other country). A WEO could also provide verification as to whether the terms of deals have been met, and act as a dispute settlement and arbitration vehicle. This would go much further than the CDM which initiates and oversees North-South transactions on climate change with oversight by the Conference of the Parties. A WEO could be proactive in identifying areas and countries between whom deals would make sense, even to the point of initiating proposals. It could coordinate single country offers, and explicitly seek to internalize free riding in the deals it brokered. It could propose mechanisms to be used in countries to assess and reflect collective willingness to pay.

4. THE ANALYTICAL UNDERPINNINGS OF A WEO

In evaluating the possible incentives to establish a WEO and the forms it may take, it is also useful to draw on the insights offered by existing analytical literature as to how international cooperation can come about in the international environmental area and what form it can take. Most models of environmental agreements have an *infinitely-repeated game* structure. Most suggest that a *minimum number of countries* are necessary to make an agreement viable. Heal (1994), for instance, discusses the formulation of environmental agreements, concentrating on emission abatement coalitions. He finds that for a coalition to be viable all members must have net gains, and this acts as a constraint on the *minimum size of the coalition*. Heal develops the concept of the minimum critical coalition (MCC), and finds that technological externalities between members of an agreement can help to overcome the free-rider problem to some extent.

However, the incentive to sustain environmental cooperation is quickly dominated by the incentive to *free-ride* as the number of countries in the coalition increases (unless strong positive externalities in the abatement technology and/or issue-linkage are introduced; or else some other commitment mechanism exists). One key issue with such agreements is therefore the size of membership and the incentives to join; also critical to a WEO. Experience with environmental cooperation also shows that small-scale deals which are successful can provide the right incentives for others to join. The incentives are not only material gain, but prestige and the potential loss of it by being seen to be on the outside of a new regime arrangement (Paterson and Grubb 1992).

Heal also points out that the minimum critical coalition is not immune to the problem of free-riding. One feature which helps to underpin environmental agreements is the presence of *positive externalities between countries from the abatement effort*. In other words, if the cost and benefits for a country of participation in an environmental agreement are positively affected by the actions of other countries, then the best choice for the country may no longer be to free-ride but instead to abate.

Unilateral reductions of emissions typically means that all costs fall on that country, while the benefits accrue to all countries, and the costs to a country of unilateral emissions reduction may be greater than its own benefits. This problem may be less severe if other countries simultaneously reduce emissions, since each country benefits the reductions of others as well as its own. The minimum critical size requires that the costs of emission reduction at least match the benefits for each country; and that this is not true for any subset of the coalition (i.e. no smaller set of coalitions can be formed). This discussion suggests that a minimum number of initial signatures might be necessary for a WEO, and in reality it would require the participation of the larger countries such as the US and the EU. This has resemblance to Sebenius's (1992) notion of a "winning coalition" of key groupings of states, which together would represent the diversity of interests on an issue and can expedite the negotiation process.

Another central issue in international environmental agreements discussed in the literature is whether they can be self-enforcing, and need not rely on financial transfers/side payments. Barrett (1994) argues that International Environment Agreements (IEAs) may be sustained by various mechanisms. One is that when a country joins the IEA, the other signatories increase environmental abatement and hence reward the country for acceding to the agreement. When a country withdraws, however, the remaining countries reduce their abatement levels as a punishment on the country for withdrawing from the agreement. These punishments and rewards are credible given the game theoretic structure that Barrett sets out in which signatories always maximize their collective net benefits, although Barrett also suggests that the punishments and rewards involved may not be sufficiently large to sustain a self-enforcing IEA. Similar to Heal, he also finds the maximum coalition to be small. The implication here seems to be that to rely on narrowly focussed self-enforcing environmental agreements as mechanisms for raising environmental quality is likely to be unsatisfactory. Broad agreement packages with cross-overs, and financial transfers (side payments) are needed.

Another issue considered in the literature is how to create and expand environmental coalitions. This is discussed by Carraro and Siniscalco (1993, 1995) who consider alternative global strategies for environmental protection. They consider cases where there are self-financed transfers and commitment; and with links between optimal environmental agreements and other agreements which involve partially excludable externalities (such as an agreement on technological cooperation). In the first case (with transfers and commitment) Carraro and Siniscalco observe that internalization of externalities is normally achieved through voluntary agreements which are characterized by cooperative behaviour amongst a sub-group of negotiating countries (hence a partial cooperation model is appropriate); and the use of self-financed transfers (e.g. to LDCs) to increase the number of signatories.

They find that strategic interactions between governments leads to a wide range of voluntary agreements to control externalities; that partial cooperative agreements amongst sub-groups of countries exist which are stable; and that gains from partial cooperation can be used to expand existing coalitions using self-financed transfers; although a minimum degree of commitment must occur. Their conclusion is that transfers can help to expand cooperative coalitions and increase overall welfare. For this to be the case, however, some degree of commitment (at least by the current members of the cooperative coalition) is necessary. The implication would seem to be that a WEO which facilitates Coasian deals with financial transfers is more likely to be a successful institutional form than one that does not, but that again a minimum size of country commitment may be necessary.

Issue linkage in international environmental agreements is another area discussed in analytical literature and relevant to a WEO. Spagnolo (1996) evaluates issue linkage, delegation and international policy cooperation, and suggests that issue linkage can help sustain cooperation by allowing asymmetric trade via exchange or transfer of expected gains from cooperation from one game to the other. He finds that linking repeated policy games, i.e. including more policy issues in a single international agreement may allow for more policy cooperation to be sustained. This is the case when the issues are substitutes in government objective functions, e.g. environmental agreements on different forms of pollution. In these cases, a single international agreement on more issues can be disciplined by the credible threat of simultaneous punishment on all issues.

Such simultaneous punishment turns out to be a stronger threat than the sum of the punishments on each of the issues considered independently, and may enforce higher cooperation on all issues. The reverse is true for issues which are complements.

Cesar and de Zeeuw (1996) also discuss issue linkage and its relevance to global environmental problems. They find that although issue linkage enlarges the zone of possible agreement, it also increases the complexity of negotiations and the risk of triggering punishments in other areas where there is non-compliance. In general, when a full cooperative outcome is not individually rational, side payments are needed to reach the best result. However, side payments, especially of money, are hardly observed in environmental agreements. They argue that in order to be able to sustain cooperation and to have sufficient gains for both countries to join negotiations, one needs exchanges of roughly equal value. In reality, they suggest, issue linkage other than through side payments does not require such a determination and does not reveal a precise willingness-to-pay.

Another aspect of issue-linkage is raised by E. Haas's (1980) work. He suggests that not only are the politics and political conflicts of each issue-area consolidated and magnified by linkage, but unnecessary complexity can be introduced. Part of the failure of negotiations on the law of the sea, for example, was that too many issues were thrown together and not separated out into manageable questions. Sebenius (1992) has also suggested that with climate change, that the most productive way to proceed may be to de-link the various sectors involved to break down potential veto coalitions. A deal which seeks to cover all aspects of the issues simultaneously is likely only to result in stalemate and be ultimately unmanageable.

There are also a number of important considerations highlighted in the regime literature on how agreements are achieved and structured. The role of entrepreneurial leaders in brokering deals and consolidating consensus around key issues is thought to be one (Young 1989). The involvement of the scientific community in shaping the contours of agreement, deciding which pollutants are most appropriately addressed and how, and which policy responses are likely to be most effective is likely to be central to the information base and legitimacy of a WEO. Haas's work on epistemic communities establishes this (Haas 1990; 1992). The occurrence of exogenous shocks which can catalyze action (Hahn and Richards 1989) and create a window of opportunity is another factor. This can take the form of an environmental disaster such as an oil

spill, which directs attention to a new need, or it can be evidence of a worsening situation as is the case with the depletion of the ozone hole. The hole in the pole scare was thought to inject urgency into policy responses on the ozone issue in 1985 (Parsons 1993). This relates to the degree of public interest in an issue, which in many ways affects a country's willingness to fund or engage in a transaction in a particular issue area. There is much evidence of environmental initiatives at the international level being demand-driven, reactive responses to public concern, rather than proactive government developments (Brenton 1994; Litfin 1993). The degree of public concern in turn, is partly a function of the existence of successful NGO campaigns and public-awareness raising (Newell 1997) or the degree of media exposure given to an issue (Anderson 1997).

Hence for the WEO, the initial country size will likely be critical; financial transfers will likely be crucial for the enforcement of arrangements, as they will generally lead to completion of deals. Issue linkage will further expand the range of deals, although problems with implementation can arise. Depending on the form of WEO under consideration, these issues acquire greater significance the larger the transaction costs involved, and the more elaborate the institutional transformation attempted. In terms of building a strong base of enduring support for itself and mobilizing a solid consensus in its favour, strong versions of the WEO will require broad public support, possibly catalyzed by an environmental disaster which draws attention to the need for urgent and drastic action. A strong and active knowledge community to underpin what a WEO does, and to help identify the most ecologically effective policy options will be key, as will an entrepreneurial leader willing and able to broker deals and command the respect and trust of all the parties involved.

5. THE POSSIBLE FORM OF A WEO

We envisage a WEO as an organization with a head office and staff, and a governing council along with a chief officer of some form. The mandate of the WEO would be to facilitate, encourage, administer, and take actions aiming to advance cross country negotiations on the environment, whose effect would be to raise environmental quality globally. The coverage would in principle include all environmental issues on which agents wanted to strike deals, although we would expect the main focus to be on areas such as species, forests, biodiversity, oceans, climate change and others with a global dimension. Environmental issues within

countries, while clearly extremely important can also be dealt with by internalization efforts in their own countries. More localized issues such as acid rain, water disputes and others where only a small number of countries are directly involved we would see as more likely to be resolvable through a process outside a WEO, since the impediments to successful bargaining are fewer.

There would be no set format for negotiations, and no principles or general rules to which arrangements would have to conform. Environmentally promoting arrangements would be concluded both at a country to country level and also involving groups within countries (NGO groups, consumers, companies). Whether subnational groups could oppose deals entered into by their own national governments within the WEO, and if so how, would also have to be decided upon. Our inclination would be to treat these as issues to be resolved within domestic political process. Deals that are concluded would be notified to the WEO, who in turn would undertake to be involved in whatever elements of administration that are required (verification, financial guarantor).

All countries who are members of the World Environment Organization would have a seat on its governing council, and would sign a protocol of accession committing them both to engage in creative pursuit of environmentally improving arrangements and to uphold all WEO decisions (including on execution of deals). The Council would notify member countries of the facilities a WEO offers to promote environmental deals. These would include verification, property rights clarification, and intermediation of financial arrangements necessary for environmental deals. The Council would instruct staff to develop proposals for implementable deals, with full information as to how they might operate and be applied in various circumstances. The Council could also instruct staff to aggressively seek out possible deals, to the point of proposing various cross-country arrangements.

To further propel forward environmental deal making, the Council could initiate and call for negotiating rounds on the environment. Because of the free rider problems with bilateral deals, a negotiating round in which a series of deals were negotiated simultaneously would likely make more progress than through stand-alone arrangements. Unlike in the trade case, with global externalities the effects of deals are automatically extended to other countries; i.e. MFN is automatic.

The WEO Council, if it so wished and obtained member country approval, could move into other dimensions of global environmental deal making. It could initiate negotiations aimed at streamlining and codifying the separate environmental treaties that now exist. It could suggest exploration of possible cross-linkage negotiations (say, trade and environment) with countries testing out what non-environment concessions may be attainable for what degree of environmental commitment. The Council could also explore whether commitments in the WEO might help underpin domestic environmental policy. Whether such actions by a WEO Council would require unanimity, or simply a majority vote by country members is clearly an issue for the development over time of a WEO.

Such an institution will clearly be shaped both by its Council and how events unfold. In setting out our view of a WEO we see a possible progressive graduation from weaker to stronger forms as the likely outcome. Such an entity in its strong form is unlikely to be implemented quickly, and the demand for it will, as much as anything else, reflect the level of concern over global environmental quality and the global costs stemming from a lack of internalization. Here, we set out three variants of a possible WEO which progress from weaker to stronger forms, and which we suggest could be implemented progressively moving from one to the next.

5.1 WEO1 Variant 1

This structure would begin as a minimal negotiation facilitation arrangement, with no activist attempts by Council (via staff) to seek out possible agreements, or to actively promote deal making. It would have a permanent Staff and Council. The costs of the organization would be covered either by contributions from members, or fees charged to parties to deals as payment for service. It would have clearly developed procedures for the verification of commitments made in environmental deals. It would also develop procedures for holding funds committed to deals in escrow accounts, and procedures for the release of funds upon successful verification.

This first stage of WEO activity would lay the foundation for more aggressive deal making to follow. On other fronts, the WEO could provide an umbrella for existing international environmental arrangements and a framework for hopefully enhanced negotiations on them. It could provide new impetus for environmental negotiation by drawing on best practice across different states, injecting new ideas and solutions into various negotiations and locating potentially fruitful future cross-issue linkages (which in this version of the institution could also

be carried out bilaterally and independently rather than only through the WEO) to spur speedier decision-making.

5.2 *WEO Variant 2*

This would effectively be the WEO proposal above plus some incremental elaborations. One could be the more aggressive pursuit of environmental deal making by the WEO Council (and staff). Another could be the explicit binding of minimum standards in existing environmental agreements. This could also provide a framework for exchanges of concessions on standards in the environmental area, beyond the environment deal making highlighted above. This could be through negotiations in which some countries commit to one standard while other countries make commitments elsewhere through other standards they sign on to.

5.3 *WEO Variant 3*

This would be the WEO Variant 2 above plus further add on elements. An arbitration/mediation facility for possible conflicts over non- environmental arrangements (trade/WTO, for instance) is one possibility. This would mean that any environmental negotiations with implications in other areas (such as the trade area) would engage non-environmental actors (the WTO) and seek agreement to an arbitration process for any possible conflicts prior to adoption. Equally, trade agreements with environmental impact could be subject to arbitration and go through a similar process involving the WEO. Such an arrangement would involve the agreement of both WEO and WTO members, and could only be worked out in detail after the creation of a WEO. This form of arrangement is discussed in Uimonen and Whalley (1997), and ideas in this direction are also presented in Esty (1994)

This variant could also provide for a packaging of existing agreements for cross issue negotiations (environmental strengthening for trade concessions). The WEO could oversee the negotiation and implementation of cross-issue agreements. This version of a WEO could also consider cases of non-compliance with international agreements and coordinated international actions by all parties could be orchestrated to remedy non-compliance. The central thrust for the WEO arrangements, however, would remain that of achieving internalization, and negotiated concessions by affected parties which move towards this end.

6. A WEO AND EXISTING GLOBAL INSTITUTIONS

6.1 *A WEO and the Bretton Woods Institutions*

A possible WEO will inevitably become intertwined with our other pre-existing global economic institutions, and whether it duplicates functions of other agencies, or creates new conflict will be an issue. Our present global institutions were cast in the 1940s when environmental issues were of limited profile compared to today. Today the trade and environment debate, which has largely centered on the treatment of environmental issues under the World Trade Organization (WTO) to date, has fuelled pressures for change. A view sometimes expressed is that as an issue addressed by global institutions, environment has lost out in the global stakes by being the latecomer. One reaction sometimes heard is that if we have a World Trade Organization, why not have one for the environment.

The Bretton Woods post war system reflected the post war thinking that issues of economic interdependence between countries largely came down to issues of trade and international finance. The IMF was to provide financial support to countries with exchange rates under pressure so as to underpin fixed exchange rates (set at "realistic" parities); the World Bank was to provide infrastructure and longer term development capital to help developing countries grow and develop; and the GATT was to agree a system of trade rules and facilitate negotiations to liberalize world trade further.

As is well known, the functions of these agencies have themselves changed over the years, but the underlying presumption that economic interdependence only (or largely) relates to trade and finance has remained unchallenged until very recently. The notion that cross border environmental effects (or global externalities) should enter global system design has not until recently (as far as we are aware) been raised. And today, the focus is largely on how environmental issues can be accommodated with the existing structure (principally the World Bank and the WTO), not how a new organization for the environment should be focussed. This is despite the fact that, in the 1940s, these agencies were not designed to deal centrally with environmental issues. While environmental issues have become an add on to the lending practices of the World Bank, and an issue which in the WTO seemingly conflicts with the goal of unrestricted free trade, they have not generated the institutional transformation that perceived problems arising from unregulated trade and finance have in the past.

Global institutional change, however, does typically not occur simply because of arguments based on consistency or symmetry. It is usually the presence (or perception) of concrete problems which the institutions are thought to help alleviate that drives change. With the Bretton Woods institutions, it was clearly the memories of the 1930s and linkage to the military conflict which followed which drove their creation. The 1930s were characterized by high retaliatory tariff barriers and competitive devaluations; a clear lack of international cooperation which helped drive the global economy into a destructive depression. The IMF and GATT were, in large part, a response to these problems; but were also seen as helping rebuild a war ravaged global economy. The emergence of a World Trade Organization happened only slowly and built on the aborted negotiation of an International Trade Organization in the late 1940s.

What a WEO would do is quite different from other international agencies. A WEO is not a WTO applied to the environment; it is not UNEP, or UNCSD or another UN body; it is not comparable to what the World Bank, regional Banks, the OECD, or anyone else does on the environment. It is an agency designed to help remedy a specific problem; the relative lack of internalization of global externalities.

The relationship between a WEO and the WTO would come under special scrutiny were a WEO to be created. In being a bargaining framework, there are no formal conflicts between the two that this creates. No additional rights or obligations are implied by WEO membership, and hence no inconsistency between WTO commitments and membership of the WEO. If in negotiating a WEO deal, a member committed to an action that was WTO incompatible, this would be subject to dispute resolution in the WTO just as say any other action outside the WEO would be.

Trade and environment issues would not disappear from WTO discussion just because a WEO were created. Pressures from environmental groups to rewrite WTO rules to allow the use of trade restricting measures on environmental grounds would continue, and remain focused on the WTO. Only if bargaining took place in the WEO which resulted in agreement to change WTO rules as part of a bargain would things change. In this case, WTO bargaining would partly shift to WEO.

Whether or not a WEO comes to fruition in the next decade probably depends upon the perceived severity of global environmental problems, whether a WEO is thought to alleviate

them, and how a WEO is thought to fit into overall global system architecture. The experience with the WTO, including its creation at the end of the Uruguay Round, suggests the importance of exploiting the right window of opportunity for the creation of a new institution. A WEO, in our view, should not be seen as yet another Bretton Woods institution, but as something apart; a bargaining framework with no formal rights and obligations, an agency devoted to reducing barriers to negotiation.

In providing a broader bargaining framework through the WEO compared to the WTO, since cash transfers are permitted and rules which restrict bargaining (like MFN in WTO) are absent, there is the possibility that the WEO in the long run could even subsume WTO bargaining. Under this scenario, the WEO could evolve into a form of World Bargaining Organization, covering both environmental and non-environmental deals.

6.2 *Developing Countries and WEO*

A group of countries whose reaction will be critical to the creation of a WEO will be the developing countries; many of whom could well be initially hostile to the idea. North-South conflicts have previously been a key factor in limiting the successful launch of international negotiations on the environment; and they will need to be addressed in any attempt to launch a WEO.

The negotiating histories of the ozone and climate issues as well as Antarctica, biodiversity and forests all indicate the likelihood of a North-South exchange over the apportionment of blame for environmental decay in any WEO discussion, and the appropriateness of mechanisms to induce the active participation by the developing world. Particularly central are property rights issues, since the south claim custody and ownership of environmental resources on their territory, and reject arguments that they should be managed as globally communal assets. While they have a clear and stated interest in global environmental quality, they have an equally firmly stated interest in their own growth and development. They seek compensation for environmental restraint, and react negatively to the possible use of sanctions to encourage their environmental compliance. For example, they seek commitment time lags and a fund in the case of ozone, and commitments conditional upon technology transfer in the case of climate change.

The reason why upon reflection developing countries may, however, respond more favourably to a WEO proposal than these earlier initiatives is the opportunities for them that lie in generating potentially significant transfers of resources as payment to them by OECD countries for environmental restraint. WEO bargaining is not bargaining only over environmental restraint; it is about payment to the environmental resource holders. If these sums are potentially large, then the developing country interest will be large.

In addition, and importantly, the WEO offers the developing world a focal point for cooperation and coalitional activity in bargaining which can yield the developing countries as a group far greater returns than if they acted singly. It is misplaced to ask what countries can individually obtain from a WEO since through joint action they can obtain much more. Their caution may reflect a perception on their part that international bodies such as the World Bank, the IMF, and the WTO have become instruments through which they can be pressured; and the fear that a WEO may evolve in similar ways. They may also see a WEO as responding largely to a Northern agenda of global internalization, which they only share to a limited degree. Their Southern agenda is to deal with environmental problems within their own countries, rather than transborder or global externalities; and for this they seek transfer of technology and direct support from the North as much as negotiated global environmental deals.

Past experience suggests that emerging new institutions have been disabled by accusations of bias towards a Northern agenda on environmental issues and operating a voting structure discriminates against poorer countries. The GEF and World Bank (Rich 1994) have suffered in this regard (Young and Boehmer-Christiansen 1998). Because the GEF is administered and housed by the World Bank and shapes its institutional character, GEF is viewed as an institutional framework created and controlled by the developed parties and favoured by them (Mott 1993:300). The GEF seeks to implement conventions which southern countries cannot or do not want to fund (Young and Boehmer-Christiansen 1998). There was also little consultation in the creation of the GEF, particularly with the parties that were to receive its funds and so the perception that the GEF was imposed persists.

The success of the Montreal ozone fund has been partly attributed to its double majority system, where decisions are sought by consensus, and where this cannot be attained a majority of each of two groups (one developed, one developing) is required (Mott 1993). Where exclusive regimes

operate, as in the case of Antarctica where an elite club of countries has made sovereign claims, LDCs (led by Malaysia) have sought to change the process by calling for the involvement of the UN General Assembly in the decision-making process (Beck (1986), Elliott (1994)). Attempts by the US to allow its companies to mine for deep seabed resources (manganese nodules) and profit from resources extracted are a further example, which ultimately led to the breakdown of negotiations on an International Seabed Authority.³ If a WEO is to be a facilitating mechanism which achieve elevated environmental quality it will need to conduct itself in an open, transparent and participatory fashion so that all information on negotiated deals is public.

Another issue which will arise is whether special treatment within the WEO should apply to developing countries. While special treatment in a bargaining framework is perhaps hard to envisage, developing country calls for non-reciprocity in the GATT in the 1970s reflected just this; trade concessions from OECD countries which are to be un-reciprocated. The principle of common but differentiated responsibility is one that has been proposed for the dual commitments of Northern and Southern countries to the global environment, since this acknowledges disparities in causation of environmental problems and in the capacity for providing solutions. This principle could provide a basis in a WEO to apportion global property rights, since without this the negotiation process will be more difficult. Non-reciprocity, however, applied to the WEO would largely come down to cash transfers without major commitments. But there could, for instance, be prior negotiation by developing countries over target aggregate resource flows before detailed item and country negotiations. Negotiated arrangements could also involve some degree of differentiation, as in the climate negotiations where countries were allocated individual reduction targets within the context of an overall target.

Negotiations in which countries choose in which areas they are willing to act in order to earn credits to be cashed in other areas may also be something developing countries would want to explore. Calculating how much that, say, Brazil has foregone by not cutting down rainforests (as a % of GNP) and estimating a trade (or other) concession that would return this loss to Brazil by

³ It was proposed that the profits from mining these resources be redistributed to other parties through the seabed authority on the basis that it was unfair for US companies to keep the profits just because they had the available technology to exploit the resources. The US rejected this idea and the authority never came about (Vogler 1995).

other means, might yield a credit accumulating and debit system which could develop across other issue-areas.⁴

Developing countries have always seen themselves having environmental bargaining chips which could be used to reassert a global agenda reminiscent of the New International Economic Order of the 1970's, including demands for fairer terms of trade, regulations of TNCs and greater provision of aid. Right wing parties in the OECD have used sensitivities over these concerns in these countries as a basis for arguing against a deeper involvement in international regimes to protect the environment, on the basis that Northern countries will be pressured into making concessions to left-wing lobbies over the environment, lending a new legitimacy to what they regard as unreasonable claims. At the same time, many developing countries view environmental issues as the latest attempt by the North to control their development. Charges of eco-colonialism abound amid debates over who is entitled to lay claim to such assets as rainforests which belong to one country, but whose use and exploitation have global repercussions (McCleary 1991). This wider political context in which a WEO will operate cannot, in our view, be ignored if developing country participation is to be secured.

An emphasis on global rather than local environmental issues in environmental debate has also served to entrench perceptions that Northern interpretations dominate Southern of environmental problems (Chatterjee and Finger 1994), and in ways which endanger the cooperation of the developing countries. A challenge for a WEO is to connect the global with the local, to make the linkages between issues apparent and negotiable and to address local concerns on a par with ones which assume more global dimensions, on the basis that they each warrant attention and that they are, in any case, closely interrelated. Mechanisms which facilitate cross-issue negotiating may make sense in this regard, and would appear at the outset to be more likely to advance the negotiating process in a WEO. If vertical (global-local) as well as horizontal (across issue-areas) linkages can be forged, the possibilities for cooperation seem better.

Developing countries lie at the heart of any new global environmental arrangement. Unlike in trade where they are proportionally small, in the environment they are large since much or most

⁴ This is similar to Read's (1994) idea of a Fossil Fuel Abstention Reward scheme, whereby LDCs would be compensated by the international community for lost income from not exploiting their reserves of fossil fuels. The goal of the scheme is to strike 'a global deal securing LDC collaboration' (Read 1994:276).

of key environmental assets are on their territory. This may raise developing country concerns, but at the same time gives them substantial negotiating power, and opportunities for gain, much of which lies outside of the environmental area. The challenge for a WEO is to find ways to offer significant benefits to developing countries from internalization, and generally harness their interest in the process.

6.3 Aid and Technology Transfer in the Global Environmental Regime

Aid and technology transfers to developing countries are also central to the perceptions on global environmental issues in the developing world, and will enter any developing country developing country evaluation of a WEO in a central way. These have been the traditional mechanisms that have been used in the past to encourage the cooperation of developing countries in international environmental negotiations, as side-payments to compensate them for undertaking commitments, rather than cash transfers.

A range of concerns have arisen with the use of these instruments, one being that they are capital-intensive, and act more to support Northern consultancies and southern élites, than provide a solid basis for advancing development (Keohane and Levy 1997). For many developing countries “green” aid is seen as serving their needs no better than the tied economic aid of the past. Environmentalists have also suggested that some of GEF’s loans have been too large for recipient countries to handle efficiently, partly because they are intended to produce global benefits rather than address local concerns.

A WEO will face the challenge that there has been little progress made in providing developing countries with the necessary technology to reconcile their own industrialization with its environmental impacts (Forsyth 1998). This failure is partly attributed to the fact that much environmental technology is privately owned and that it is difficult for states to force companies to share their property. Much technology transfer takes place beyond the control of governments; indeed government-government technology transfer plays only a minor role. The technology transferred is outdated, and ineffective, since LDCs provide outlet markets for the older and cheaper technologies of the North. These technologies are also often not adapted to local needs and priorities, and to be successful skills as well as technology have to be transferred, which rarely happens (Forsyth 1998).

A further issue is that many of the institutions that administer the provision of financial resources and technology on a grant or concessional basis are Northern dominated, and driven by the interests of their Bretton Woods sponsors and their actions are a long way from achieving the internalization of environmental costs. As Young and Boehmer-Christiansen argue “the GEF is but a minor component of global finance and international policy-making which is unlikely to have any real impact on the structures creating the problems it attempts to solve” (1998:49).

What is perhaps important in all this to the WEO is that while bargaining may imply mutual consent and joint gain, the perception of many is that economic-environmental exchanges are not everywhere beneficial to groups within developing countries. If the WEO were to act as guarantor of North-South transactions and subsequent verifier that commitments have been undertaken, it may well make these sort of exchanges more legitimate and acceptable to many developing countries. Both a shift towards positive engagement in new bargained mechanisms for achieving North-South transfers and the limited ability of existing institutions to address issues of raising global environmental quality may drive their own internal dynamic supporting change of the form we suggest.

7. IMPLEMENTATION ISSUES AND DOMESTIC POLITICAL PROCESSES

A large range of implementation issues would arise with a WEO, not all of which we are able to fully anticipate, but on some of which we set out our thinking. Implementation will clearly involve political consideration, especially in the developing world, on which we also touch.

7.1 Country and participant coverage

With a minimal WEO involving no formal rights or obligations for members, the presumption is that a WEO would simply exist as an agency making its offices available to those who want to use them. These would include both national governments and NGO and other groups within countries. In the absence of initial widespread participation in environmental deals, only those countries and groups most directly affected by particular issues would participate. On the other hand, the prospect of financial reward could serve to broaden participation to a sufficient number of countries to allow the WEO to operate effectively. In the first instance, a WEO may require

⁵We are grateful to Peter Newell for his input into this section.

relatively few deals to be agreed for net benefits to accrue providing the larger countries participate.

A key issue will be which groups are allowed to participate in the organization. For now we envisage the major role to be played by national governments, but NGO's and other domestic groups could also participate. The WEO will seek to produce exchanges of concessions by parties to an agreement, and each party will have to implement their commitments or the deal will not be executed. But conflicts would arise when groups wish to oppose deals; such as opposition to national governments from domestic groups. The presumption is that in making deals governments would have to engage, or otherwise engage opposition groups in dialogue and discussion. As all deals will have to be authorized by the WEO council, the Council would have to develop procedures for determining when such deals are not confirmed due to domestic opposition.

7.2 *Topic/area treatment*

Another issue is whether a WEO would seek to cover all environmental issues, or only those which are global, i.e. whether localized forms of pollution and degradation would also be within its remit. We would see the initial list of issues as dominated by species, biodiversity, carbon emissions, forests, ozone, water; and to be broadened from there to include issues on which commitments could be made and exchanged. The initial emphasis would likely be on global issues where the impediments to deals are the largest; since within countries domestic process could provide internalization initiatives. For issues affecting only a small group of countries, it seems more likely that internalization could anyway occur.

Some issue areas may lend themselves more easily to bargained transactions, with ongoing scientific input indicating the most pressing as well as amenable environmental problems. The WEO could attempt to set priorities for deal making in areas where there is agreement that action is required. Where property rights are unclear, such transactions would be more problematical and simpler forms of bargained agreements may be more difficult to achieve. This could be the case with marine pollution, for example; where the issues at stake go beyond the sovereign jurisdiction of any one state. Global commons issues where all contribute to the problems and all suffer its consequences are also more complex and might still be addressed within a WEO, but by joint negotiation, including side payments to countries. In the short-term, transactions where

control over resources is clear would likely be more feasible to attack through Coasian deals. In the longer-term deals with a larger number of parties may be feasible, although clearly establishing the contractual terms across a number of parties adds complexity.

7.3 *The Constitutional Structure of a WEO*

A range of issues also arises for a WEO with regard to its constitutional structure. Would it be governed by a council? Would a Council need to approve all negotiated arrangements, and verification determinations? What would be the membership of the council and its voting structure? How often would meetings of the council occur?

One possible governance structure is as set out above, namely, that all countries who are members of the WEO would have a seat on its sovereign Council. Parties would then be expected to sign a protocol of accession which outlines their commitment to pursue the goals of the institution and abide by its decisions and working procedures. The Council would be the main channel through which transactions were conducted and overseen once in place. The Secretariat would be under the direction of the Council, who would approve of all proposals to initiate deals. The form of the institution would also depend on the type of WEO which emerges. The Council structure proposed above, would seem appropriate for a minimal deal promoting WEO, but stronger versions of the institution might require more comprehensive powers.

7.4 *Resource requirements*

The resource requirements of a WEO would clearly be an important issue as would whether funding would be through user fees or member contributions. Given the likely uneven use pattern by members, a system of user fees seems the most appealing.

If stronger versions of the WEO were to emerge, a new tier of international bureaucracy would be required to oversee and coordinate international deal making. The level of surveillance that such an organization would be expected to undertake in order to fulfil its mandate of verifying transactions, and the number of staff required to carry out these functions, could demand a significant budget. The political willingness of key countries to fund such an arrangement obviously looms large.

A unit coordinating and overseeing transactions may be more feasible in terms of the size of funding required. The scope of the mandate of the institution, would dictate both the human and financial resources required, as well as the degree of public support it would need to operate effectively. A WEO would need to justify expenditures by itemizing what it adds to existing international environmental arrangements; strong case may have to be made that it supplements the roles already performed by institutions such as UNEP and the CSD.

For the WEO envisaged above, there would be a secretariat, and a permanent home and administrative centre for the organization. Depending on the functions which the WEO would perform, there might also be need for national branches of the WEO. These would need to be supported by the central WEO office, but would need to facilitate national capacity building for implementation. This would be essential in ensuring that determinations made by the WEO regarding compliance with commitments made were broadly acceptable.

The scale of this task and the potential resource commitments should not be underestimated. And if there is a lack of civil society support for such institutional transformation, and a lack of state capability to enforce the terms of agreements adjudicated by the WEO, the change which a WEO alone might be able to achieve could be limited. Everything will hinge on the severity of the perceived need for the institution, and the acceptability of its processes.

7.5 *Time frame*

We do not anticipate major difficulties with the time frame needed to establish a WEO. A WEO could simply allow parties to become members when they are ready and willing to engage in transactions. With conventional treaty arrangements there is either a single entry into force, or it is staggered in some way (for instance, according to level of development as is implied by the Climate Convention with the annex system). But, if a group of OECD countries were concerned about deforestation, they could approach the WEO offering funds to cover projects aimed at slowing the rate of deforestation. It would then be up to members to either accept the money on the basis offered. Problems of getting every party to sign on at the same time to an agreed format, or working out the criteria by which parties acquire commitments on different time-scales are avoided.

Although there may need to be a critical mass to successfully launch a WEO, parties would participate as and when they were willing to serve as parties to these transactions. In the early stages of a WEO it is possible that short term projects would be the most common on the basis that they avoid the risks associated with possible and subsequent institutional demise.

7.6 Tiered commitments and the developing countries

Dealing with the perception that most environmental initiatives are driven by the North is perhaps the most central implementation challenge facing a WEO. Agreements on forests and climate change have illustrated this problem, where developing country governments have resisted what they see as the imposition of Northern definitions of environmental problems (Chatterjee and Finger 1994).

Pertinent for a possible WEO is the experience with debt-for-nature swaps, which generated resistance from many southern governments on the argument that they were a deliberate attempt to exploit the economic vulnerability of poorer states as a way of advancing the goals of the North, as well as a threat to their autonomy. Even where there exists an economic incentive for participation, broader political sensitivities may thus act to complicate the negotiation of North-South deals. The WEO may be able to circumvent some of these problems by encouraging Southern countries to take a proactive lead in offering up commitments and programmes that Northern groups may want to fund.

A key issue will be whether there should be special treatment for developing countries, and if so, what form of special treatment. In the form a WEO is set out above, and in which internalization transactions are negotiated, differentiated commitments between and among North and South seemingly become less relevant. The now widely used description of common but differentiated responsibility has been one approach advocated for separately defining the obligations of North and South on environmental issues. But if the WEO acts to facilitate transactions and monitor compliance, guidance offered as to which deals offer the highest return for the international community would not seem to offer room for differentiated rights and commitments. There is little need to set out specific rules for negotiations, and this approach could be a way of bypassing lengthy negotiations on tiered arrangements which have stalled previous attempts at environmental improvement at the international level. By involving fewer parties, it may also allow for a shorter time lag between brokering a deal and overseeing its implementation.

Balance (in terms of representation) will be important to the WEO, since the North has made it clear in the past, most notably in the GEF, that it will largely decide which projects to fund. In acting as an arbitrator and intermediary, the WEO will need to stem fears about developing countries seeking backdoor aid, and about the North seeking to control the development of the South. By introducing trade into environmental bargaining, more immediate gains through trade concessions could also accrue to both developed and developing country negotiating partners, so that longer-term sacrifices would be rewarded with shorter-term gain for the recipients. The WEO could also strengthen the domestic negotiating position of those in favour of taking environmental actions. By working with NGOs and providing supportive coalitions with strategic information, a WEO could help consolidate the power of these groups in favour of cooperation on environmental initiatives through the WEO. For governments interested in cooperation but fearful of the domestic political price, a WEO could serve as a focal point of blame for initiatives which fail, allowing governments to retain credibility even in the light of implementation failures.

The bottom line seems to be that opportunities exist for the developing countries in a WEO in generating inward financial flows to speed development, in return for various environmental commitments by them. There are, however, many political impediments to the use of a WEO in this way, and these will need to be confronted and overcome.

7.7 Domestic politics and a WEO: making implementation matter

Domestic politics will be important to the success of a WEO. Many previous environmental agreements have failed due to their limited ability to enforce their provisions at national level. A WEO will have to be mindful of the many pitfalls.

This poor experience has been the result of a number of (inter-related) factors. One has been the development of black markets which undermine attempts to eliminate a polluting substance. The black market in CFCs is one example of an illegal trade which weakened the Montreal Protocol. Responses to problems of this sort have centered either on NGO whistle-blowing, where environmental groups draw public attention to instances of non-compliance as in the cases of ocean dumping (Ringuis 1997), whaling, CITES or unilateral state sanctions. With regard to the latter instrument, the US, for example, has threatened to impose economic sanctions on states failing to fulfil their obligations under the CITES agreement, in order to limit non-compliance.

The threat has been used against China and Taiwan to deter illegal trading which threatened to undermine the provisions of the CITES agreement. One role for the WEO therefore may be to multilateralize such sanctions, so that procedures under which non-compliance is penalized become transparent and are seen to be more fairly applied.

The failure of many initiatives at the local level has also been explained by their connection to land rights and property issues, social inequalities and corruption. Fully addressing these problems would certainly be beyond the scope of an international environmental authority, however far-reaching its powers of enforcement, but recognition of the problems will be needed. Lack of institutional capability at a national level means that in many countries environment ministries do not exist; they are either subsumed within planning or health ministries as in China, Chile and Thailand, or they do not exist at all, as is the case with many transition countries. Success for a WEO could therefore rest on its ability to encourage government agencies in member countries with the required mandate to push for the implementation of WEO transactions. Transition countries seeking accession to the EU have typically scaled up their environmental standards in order to achieve EU membership to eliminate the possibility of pollution havens developing in Central and Eastern Europe, illustrating how economic gain can drive institutional reform in the environmental area (Baker 1996).

Problems of limited institutional capacity can also reflect a lack of a supportive political culture and willingness to accept the terms of environmental agreements. In countries where there is no strong environmental movement backing the goals and practices of an agreement, there are fewer informal political checks and balances on governments. What is problematic for a WEO is that these same societies are also likely to be resistant to a more intrusive bureaucracy with verification powers, leaving a gap to be filled by implementation failure.

Lack of expertise on the scientific, technical and political fronts are further potential problems for a WEO. The IPCC (Intergovernmental Panel on Climate Change) has developed a mechanism for training “southern” scientists in climate modelling systems to enable them to participate in the scientific research which underlies policy decisions on climate. A certain proportion of scientists participating in the panel’s work now have to be from less developed countries (Rowlands 1995). An open and representative knowledge - building process to feed in to project discussions will be central to a WEO success. Hence while the governing Council of

the WEO could be made up of government officials, representative teams of experts (both scientific and medical) would be helpful in identifying internalization opportunities, verifying their implementation, and quantifying the environmental gains.

7.8 *WEO's relations with existing international environmental institutions*

Clearly, a WEO would not exist in a vacuum, and while we emphasize the case for the creation of a new global environmental institution, it would be naive to think that its functions would not impact upon the activities of several existing global institutions. There is now a multi-tiered, multi-centered overlapping network of environmental governance, which would be part of the background to a new global environmental institution. The issue of inter-regime relations is likely to be hotly contested; which institution would take priority when there is a clash of mandates? what value would be added by the creation of such an institution? what would be the division of labour between the WEO, WTO, UNEP, CSD and regional and bilateral environment arrangements?

There is, as yet, no institution performing the roles of those we propose for a WEO. None of the existing institutions are aimed at achieving internalization of environmental costs. Most are either issue-based or project-focussed, or they oversee different types of North-South transactions. There is thus no a priori need for their immediate reconciliation with a new organization. The issue is more one of the appropriate division of labour between these institutions, so that each performs the functions which suit it best. Clearly there will continue to be areas of overlap, and the WEO can usefully draw upon the experiences of other institutions to ensure that its" work is as effective as possible, and does not repeat the mistakes made by other institutions. As the WEO evolves from an incremental deal making institution to a global power broker, it should to be expected that these institutions will seek to accommodate themselves and realign their activities in the light of the changing mandates of other components of this new architecture.

One of the key institutions that a WEO would have to deal with is the Commission on Sustainable Development; the institution created at UNCED to oversee the implementation of Agenda 21. By common agreement it suffers from bureaucratic weakness, lack of enforcement powers, and too broad a mandate (Dodds 1997). One of the key issues facing the establishment of new WEO would be whether to subsume the CSD or to encourage its continuation as a

consultative or advisory body to the WEO. Depending on the form that a WEO were to take; it could perform discrete but complementary functions. In the initial stages of a WEO, the CSD could have the responsibility of overseeing the implementation of the Rio agreements as they now stand. Only if the WEO seeks, at a later stage, to coordinate and reconcile some of the existing environmental agreements which the CSD monitors, then a reappraisal of institutional competence would have to take place. Otherwise, the two institutions could proceed along different paths. The CSD does not oversee financial transactions or attempt to arbitrate conflicts in non-environmental areas as a WEO would. In serving as a clearing house of information and documentation on the state of the Rio accords, it could clear the way for subsequent WEO activity.

Another key agency is the United Nations Environment Programme (UNEP), primarily an information clearing house, though in more recent years it has taken a more proactive role in encouraging cooperation, not just by coordinating the activities of the scientific community, but by encouraging pro-active groups to play a more active role in negotiations. Recently, it has funded and hosted a number of meetings with the insurance industry under a UNEP initiative to take action where key economic interests are threatened, as in the case of climate change (Brown 1997). Although it has enjoyed some success under its entrepreneurial executive directors Mostafa Tolba (Young 1989) and Elizabeth Dowdes, it suffers from underfunding and a weak position in the UN bureaucratic structure (Conca 1995) and is not equipped to drive forward environmental negotiations.

Another component of the existing institutional architecture is the Global Environment Facility (GEF). The GEF is perhaps the clearest embodiment of everything which concerns less developed countries about the global environment debate. It operates in much the same way that the World Bank does, on a cash for votes basis. It crystallizes a preference for aid in exchange for commitments from developing countries rather than trade, despite a clear preference for improved terms of trade and acknowledgment that many forms of aid been ineffective. There is clear overlap between the GEF and a possible WEO, given the former's involvement in North-South transfers, areas that WEO activities may touch on. It specializes in technology transfer and projects associated with a narrow range of activities to further the goals of global treaties on global warming, biodiversity and ozone depletion; while the WEO's mandate would be to achieve internalization over a broader range of issue areas. The same arguments apply to the

Clean Development Mechanism, which, in principle, comes closest to the operating mechanisms of the WEO. But this body operates exclusively in the area of climate change, and this leaves ample scope for a new global institution operating different procedures in different issue areas.

One way of proceeding would be for existing environmental bodies to be subsumed in the WEO. This could, however, provoke resistance from the staff and users of the work of existing institutions, but could serve to avoid unnecessary duplication of workload. On the other hand if the WEO were to adopt the role of an initiator, negotiator, arbitrator and implementer of environmental deals, then its activities need not directly overlap with those of the existing institutions.

Finally, there is the issue of the relationship between a WEO and the WTO. Calls for a WEO, as we note in our introduction, have in part grown out of the trade and environment conflict in the WTO which has grown in profile throughout the 1990's. Those from a trade and environment background may tend to see a WEO as modelled on a WTO, but as the preceding discussion makes clear the problems each seeks to solve are different, and hence the two are at best only loosely related. Both are agencies which in varying ways seek to promote bargaining; one over trade and the other over bargaining, but one seeks gains from trade while the other seeks internalization. To the degree that the WTO would like to see a parallel agency as the focal point for environmental debate to take trade and environment pressure off the WTO, institutional support from the WTO for the creation of a WEO may be quickly forthcoming.

8. CONCLUDING REMARKS

This paper sets out our ideas on why a new global environmental bargaining entity, a World Environmental Organization, or WEO, might be needed and how it might work. Our starting point is the relative absence of mechanisms which achieve internalization of global environmental externalities, against a background of repeated attempts to define a global regime based on the principles inherited from Agenda 21. The outcome of present arrangements we see as a patchwork quilt of lowest common denominator arrangements from around 170 environmental treaties worldwide. These are limited in scope and often minimal in impact. We argue for the need for an international agency to facilitate deals between countries and entities within countries so as to support and underpin internalization. The intellectual underpinnings of such an entity are provided by the work of Coase (1960).

As much as anything else, we see a WEO as a facilitator of international deals on the environment which aim to raise environmental quality. In the past, concluding such deals have faced a range of impediments; ambiguous property rights, free riding, time inconsistency, verification, and incomplete financial intermediation. We see a WEO as striving for improvements in all these areas so as to facilitate environmental quality improving deals both globally and across countries. A global environmental regime based on mechanism design rather than principles is what we advocate, since the objective of internalizing environmental externalities seems to be clearly agreed.

No wide ranging proposal such as ours will be adopted overnight, and we recognize many impediments to it which we discuss in the text. But if global environmental quality worsens in the years ahead, as many fear, perhaps these ideas will play a role in providing intellectual underpinnings, to institutional change in this area.

9. REFERENCES

- Agenda 21 (1994) *Agenda 21, The United Nations Programme of Action from Rio*, UN (UNCED), December 1994, New York.
- Anderson, A. (1997), *Media, Culture and the Environment* London: UCL Press.
- Baker, S. (1996), "The scope for east-west cooperation" in Blowers, A. Glasbergen, P. (eds.) *Environmental Policy in an International Context: Prospects* London: Open University Press.
- Barrett, S. (1994), "Self-enforcing international environmental agreements", *Oxford Economic Papers*, 46, 878-894.
- Beck, P. (1986), *The International Politics of Antarctica* London: Croom Helm.
- Brenton, T. (1994), *The Greening of Machiavelli: The Evolution of International Environmental Politics*, London: RIIA/Earthscan.
- Brown, P. (1997), "Change in climate of opinion" *The Guardian*, July 3rd, p. 3.
- Carraro, C. and S. Siniscalco (1993), "Strategies for the International Protection of the Environment", *Journal of Public Economics*, 52, 309-328.
- Carraro, C. and S. Siniscalco (1995), "Policy Coordination for Sustainability: Commitments, Transfers and Linked Negotiations", in I. Goldin and L. Alan ed., *The Economics of Sustainable Development*, CUP.
- Cesar, H. and A. de Zeeuw (1996), "Issue Linkage in Global Environmental Problems", *Economic policy for the environment and natural resources: Techniques for the management and control of pollution*, New Horizons in Environmental Economics series. Cheltenham, U.K.
- Chatterjee, P. and Finger, M. (1994), *The Earth Brokers: Power, Politics and World Development*, Routledge, London.
- Coase, R.H. (1960), "The Problem of Social Costs", *Journal of Law and Economics*,
- Conca, K. (1995), "Greening the UN: Environmental organizations and the UN system" *Third World Quarterly*, Vol.16 No.3, pp. 103-119.
- Dodds, F. (1997), (eds.) *The Way Forward: Beyond Agenda 21*, London: Earthscan.
- Dolbear, T. (1967) "On the Optimum Externality", *American Economic Review*.
- Elliott, L. (1994), *International Environmental Politics: Protecting the Antarctica*, London: MacMillan.

- Esty, D. C. (1994) "Making Trade and Environmental Policies Work Together: Lessons from NAFTA." *Aussenwirtschaft* 49:1 (March) pp. 59-79
- Forsythe, T. (1998), "Renewable energy investment and technology transfer in Asia", Workshop Report, Briefing Paper No.51 October Chatham House, London.
- Grubb, M. *et al* (1993), *Earth Summit Agreements: A Guide and Assessment*, London: Earthscan.
- Haas, E. (1980), "Why collaborate? Issue linkage and international regimes", *World Politics*, Vol. 32 No.3 April, pp. 357-405.
- Haas, P. (1990), *Saving the Mediterranean: The Politics of International Environmental Cooperation*, New York: Columbia University Press.
- Haas, P. M. (1992) "Epistemic Communities and International Policy Coordination: Introduction", *International Organisation* 46:1 (Winter) pp. 1-35
- Haas, P., Keohane, R. and Levy, M. (1993), *Institutions for the Earth: Sources of Effective Environmental Protection*, Cambridge: MIT Press.
- Hahn, R. and Richards, K. (1989), "The internationalization of environmental regulation", *Harvard International Law Journal*, Vol.30 No.2 Spring, pp. 421-46.
- Heal, G. (1994), "Formation of international environmental agreements", in C. Carraro (ed.), *Trade, Innovation, Environment*, Kluwer Academic Publishers, London.
- Keohane, R. and M. Levy (1997) (eds.), *Institutions for Environmental Aid*, Massachusetts: MIT Press.
- Litfin, K. (1993), "Eco-regimes: Playing tug of war with the nation-state" in Lipschutz, R. and Conca, K. (eds.) *The State and Social Power in Global Environmental Politics*, New York: Columbia University Press, pp. 94-119.
- Litfin, K. (1994), *Ozone Discourses*, New York: Columbia University Press.
- McCleary, R.M (1991), "The international community's claim to rights in Brazilian Amazona", *Political Studies*, Vol. 39 December pp. 691-707.
- Mott, R. (1993), "The GEF and the conventions on climate change and biological diversity", *International Environmental Affairs*, Vol.5 No.4 Fall.
- Newell, P. (1997), *The International Politics of Global Warming: A Non-Governmental Account*, Ph.D. University of Keele.
- Newell, P. (1998), "Who CoPed out at Kyoto? An assessment of the Third Conference of the Parties to the FCCC' *Environmental Politics* 7(2) Summer 1998.
- Parsons, E.A (1993), "Protecting the ozone layer" in Haas, P., M. Keohane, R.O and M.A. Levy (eds.), *Institutions for the Earth: Sources of Effective International Environmental Protection*, Cambridge MA:MIT Press.

- Paterson, M. and Grubb, M.(1992), “The international politics of climate change”, *International Affairs*, Vol. 68, No.2, pp. 293-310.
- Pigou A. (1924) *The Economics of Welfare*. Macmillan, London.
- Porter, G., and Brown, J. (1996), *Global Environmental Politics*, 2nd Edition, Westview Press, Boulder CO.
- Read, P. (1994), *Responding to global warming: The technology, economics and politics of sustainable energy*, Zed Books, London.
- Rich, B. (1994), *Mortgaging the Earth: The World Bank, Environmental Impoverishment and the Crisis of Development*, London: Earthscan.
- Ringuis, L. (1997), “Environmental NGOs and regime change: The case of ocean dumping of radioactive waste”, *European Journal of International Relations*, Vol.3 No.1 pp.61-104.
- Rowlands, I. (1995), *The Politics of Global Atmospheric Change*, Manchester: Manchester University Press.
- Spagnolo, G. (1996), “Issue Linkage, Delegation and International Policy Cooperation”, Nota di Lavoro 49.96, Fondazione ENI Enrico Mattei, Milan.
- Sebenius, J. (1992), “Challenging conventional explanations of international cooperation: negotiation analysis and the case of epistemic communities” *International Organization*, Vol.46, No.1 Winter, pp. 230-255 .
- Sebenius, J. (1994), “Towards a winning climate coalition”, in I. Mintzer and J. Leonard (eds.), *Negotiating Climate Change*, pp.227-321.
- Susskind, L. (1994), *Environmental Diplomacy: Negotiating More Effective Global Agreements*, Oxford: Oxford University Press.
- Uimonen and Whalley (1997)
- Vogler, J. (1995), *The Global Commons: A Regime Analysis*, Sussex: John Wiley and sons.
- Young, O. (1989), *International Cooperation: Building Regimes for Natural Resources and the Environment*, Cornell University Press.
- Young, O., Demko, G. Ramakrishna, K. (1991), *Global Environmental Change and International Governance: Summary and recommendations of a conference held at Dartmouth college*.
- Young, Z. Boehmer-Christiansen, S. (1998), “Green energy facilitated? The uncertain function of the Global Environmental Facility”, *Energy and Environment*, Vol.9 No.1.