

Making Environmental Deals: The Economic Case for a World Environmental Organization

John Whalley and Ben Zissimos

SUMMARY

Others in this volume have spelled out *what* the problems are on the global environment front. We discuss *how* these issues might be addressed. We advance a rationale for a new international environmental body – a World Environmental Organization or WEO – whose primary function would be to facilitate bargains on the global environment.

We use, as a point of departure, the international trade regime. The General Agreement on Tariffs and Trade/World Trade Organization (GATT/WTO) tries to liberalize trade in goods and services by removing border impediments through negotiated exchanges of trade policy concessions. We suggest that a World Environmental Organization (WEO) should have a similar principal focus, namely, 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 changes (trade policy changes, for instance), and other considerations might fall under the bargaining umbrella of a WEO.

We contend that such bargains would result in improved environmental quality and transfers of resources for developmental purposes to poorer countries, which are the main custodians of these assets.

WHAT WE ARE NOT PROPOSING

Our idea differs from those underpinning other recent proposals for a global environmental body, stemming, in one way or another, from the trade and environment debate now embroiling the World Trade Organization. Calls have come from high levels, including WTO Director-General Supachai Panitchpakdi, for a new body separate from the WTO, where environmental issues could be discussed. According to several academics, such a body would be more qualified than the WTO to resolve conflicts between trade agreements and the environment (Charnovitz, 1993; Runge, 2001; Esty, 2000). Prominent politicians, such as French President Jacques Chirac, former French Prime Minister Lionel Jospin, and former Soviet leader Mikhail Gorbachev, have suggested the need for both a strengthened and consolidated global environmental agency, and an agency to oversee present international environmental treaties and other arrangements now in place.¹

Our view is that these calls have not really focused on how to address central or substantive environmental policy problems, but instead have dealt with tangential issues, in proposals that are likely to be inconsequential in impact. Even worse are vague proposals to strengthen the United Nations Environment Programme (UNEP), to oversee enforcement of existing environmental treaties (which contain their own enforcement arrangements), or to provide an alternative location in which to discuss trade and environment issues (von Moltke, 2001; Juma, 2000). Neither the restructuring proposals nor the tinkering reforms deal with the central global environmental problem, namely, the relative lack of internalization of cross-border and global externalities.

The issue is not one of seeking out mutually agreed upon statements of principle of what constitutes sound environmental management (in the tradition of sustainability, the Stockholm Declaration, the Brundtland Report, the Rio Declaration, and Agenda 21) or suggesting reorganization of current institutional arrangements, but rather of how we design mechanisms to achieve internalization goals.

¹ For texts of speeches, see Ruggiero (1998), Panitchpakdi (2001), and Jospin (2002).

THE CHALLENGE OF INTERNALIZING CROSS-BORDER EXTERNALITIES

We regard the lack of “internalization of cross-border and global externalities” as the central global environmental problem. An externality is a (usually negative) consequence of the production of a commodity that is not reflected in its price. In other words, society’s valuation of the good does not reflect its real social and environmental cost. For example, pollution emitted from an industrial plant that affects residents of the neighboring area is regarded as an externality. When the plant’s operating decisions do not take these consequences into consideration (i.e. do not compensate the population, do not alter the price of the products, or the process through which they are manufactured), the externality is not internalized.

“Failure to internalize,” means, essentially, the collective failure to pay for the environmental costs associated with having commodities in the marketplace. These costs are often not borne by the producers and are either assumed by governments or never addressed, leaving others to suffer the consequences.

Internalizing *cross-border* externalities entails finding ways to prevent or repair damages that transcend borders or affect global systems like the atmosphere or the oceans. In the case of the industrial plant, if the people who suffer from air pollution could measure the harm done to them and negotiate compensation from the polluters, the externality would be internalized. Facilitating the negotiation of similar deals for transboundary and global concerns would be one of the central tasks of a World Environmental Organization.

CURRENT ARRANGEMENTS DO NOT ADDRESS INTERNALIZATION

We see the present global environmental regime as deficient in attaining the internalization goal we suggest. The principles embodied in the Rio Declaration and a series of approximately 200 largely issue-specific environmental agreements (UNEP, 1996) have, in our view, relatively little to do with solving the problems caused by the environmental consequences of market transactions that are not factored in by parties to the transaction.

Even though a small number of recent treaty arrangements encourage bargaining deals between parties with different interests (for example, the Kyoto Protocol allows countries to buy or sell permits to emit CO₂), we suggest that the patchwork quilt of issue-specific, science-driven global and regional treaties have not achieved full internalization, as might be possible under a World Environmental Organization (WEO). These narrow topic and largely non-side payment negotiations have spawned shallow treaties under which opportunities for achieving more substantial joint gains are not discussed.

Currently, few mechanisms guide and focus efforts to internalize externalities that cause global environmental failure.

A DEALMAKING AGENCY COULD ADDRESS INTERNALIZATION

We suggest that these failures of negotiation can best be corrected through a new agency that aims to account for as many of the social costs of market transactions as possible through innovative and aggressive environmental dealmaking. The World Environmental Organization we propose remedies what we regard as a relative lack of Coasian deals to internalize externalities at the international level.² Such a WEO could be designed to cover all externalities, both within and across countries. Our main focus is on cross-border externalities, since within-country externalities can in principle be dealt with by solely domestic initiatives.

² Coase (1960) suggested that those who cause and those who receive damage can (and often do) bargain between themselves so as to internalize externalities. For this to occur, Coase stressed that property rights assignments are needed to clarify who has rights to do what. In the case of a factory that causes air pollution, for instance, a Coasian deal is possible if all parties agree that the factory owners must compensate people who suffer from pollution, or that those who suffer from air pollution should compensate the factory owners for using cleaner but more expensive production technologies.

We see the central objective for a WEO as facilitating cross-country deals on environmental issues with the aim of raising environmental quality. Those who have custody of assets in one country should, through bargained deals, be able to get those abroad who value these assets highly to pay for higher standards of environmental management for the wider benefit.

The result would be improved environmental quality, as well as monetary 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 through such an approach.

Entities such as a WEO also sometimes evolve out of small beginnings, and slowly grow into full form. Only time will tell whether the institutional structure we outline here emerges from the present global environmental regime, or whether radical response to future external shocks will ultimately prove to be the main driving force.

INITIATING CROSS-COUNTRY INTERNALIZATION DEALS

The central activity of a World Environmental Organization would consist of generating internalization deals between countries (and/or groups of agents within countries) on global environmental issues. Deals would involve verifiable environmental commitments exchanged across countries in return for various forms of compensation, including cash. The deals could be government-to-government deals of various kinds, or also involve private sector agents (companies, representatives of community groups) in various ways.

The deals could have specific environmental goals. For species, for example, the target might be species population levels by a specified target year. For biodiversity, it might be access to undisturbed lands guaranteed over a period of time. For coral/oceans, it might be the portion of unimpaired coral in coastal waters. For carbon emissions,

it might be a maximum emission level from the country over a time period, or (as in the Kyoto Protocol) cutbacks from emission levels. With water, where there are international disputes over flow rates through territories and water quality indicators, these could also be bargained for in return for considerations, as above. Toxic waste commitments could be bargained for in terms of annual levels of discharges. All these deals would constitute implementable and verifiable environmental commitments, and could be bargained over in a WEO for considerations in cash or other compensation.

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

The effect of these deals would be for agents who were the source of global environmental damage to take into account the costs of that damage to others through their private decisions.

Species and forests would be protected in the interests of foreign consumers, who in turn would pay for environmental quality improvements. Carbon emitters, for example, would take into account the costs that incremental climate change inflicted on others; deforesters would take into account the incremental loss to others in global amenity value and habitat loss. Custodians of assets would be compensated in the case of forest stewardship, or emitters in the case of carbon if they agree to use more expensive but cleaner production technologies. Explicit bargained arrangements involving both governments and non-governmental groups would thus reflect negotiated deals in which property rights dictated the direction of payment for reduced environmental damage.

WEAKENING THE IMPEDIMENTS TO INTERNALIZATION DEALS

Ambiguous property rights, free riding, time inconsistency, and contract enforcement are four central reasons why global externalities go un-internalized. The difficulty of assembling coalitions and the problem of side payments are other related concerns. A central aim of a WEO would thus be to weaken the impediments to internalization deals that currently exist.³

Property Rights and Environmental Dealmaking

A key impediment to global environmental dealmaking in a World Environmental Organization will clearly be the ambiguities of property rights both across and within countries.

Across countries, national governments often assert their implicit right to regulate and protect economic activity, involving different claims over environmental assets. OECD countries often argue, for instance, that forests are the lungs of the earth (globally communal property) and thus they have the right 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 argue that they should instead be compensated for showing environmental restraint over the use of their own environmental assets. The 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 that courts often do not adequately resolve. Native peoples may have various rights to biological species, even if formal land rights are held elsewhere. Squatters in some countries exert *de facto* property rights over species, forests, and biodiversity.

³ Note that a WEO such as we propose is some distance from the current WTO. While the latter is both a rule and a bargaining framework, it is restrictive, since no cash is allowed in bargaining and the rules of the WTO Charter (via GATT 1994) also constrain allowable bargaining (such as through the Most Favored Nation rule, which prevents pair-wise deals). The WTO Charter's initial focus was more on preventing a reversion to the global trade regime of the 1930s in the postwar years, as well as further liberalizing through negotiated exchanges of concessions, than on internalizing externalities.

EXAMPLES OF BARGAINS

A government in country X with no rainforests might strike a deal on behalf of its citizens with a government of country Y with rainforests. Its effect might be that a specified fraction of land in country Y would remain under forest cover for a specified time period (twenty or forty years, for example). 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 impose this undertaking upon its residents. This could be done through logging bans, export taxes on logs, logging licenses, or other internal arrangements.

Alternatively, a group of concerned citizens in country X could negotiate independently of their national government with a community group that has 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 arise in both cases.

For a WEO, this raises difficult questions of who is to deal with whom to generate environmental quality-enhancing bargaining. Coase (1960) argued that clear assignment of property rights is needed before any environmental dealmaking occurs, and a central task for a WEO would be to help to clarify property rights to facilitate such deals. Property rights related problems partially explain why cross-country deals on environmental issues have been science-based and lowest common denominator in outcome, rather than Coasian in character, and why property rights issues would have to be a part of WEO activity.

This will not be easy, although some aspects may be more straightforward than others. Where multiple land registration schemes operate, a WEO could help simplify and consolidate them. Where non-timber rights to forests arise, for example, a WEO might codify them and bring them in as part of the deal. Across countries, a WEO could accept that de facto rights devolve to the country with assets on its territory.

Because coercion is not a viable solution, 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 international courts with clear authority to rule on such rights, would seem to be that custody of assets yields ability to bargain, and that bargaining becomes more satisfactory as an internalization device the more secure the custody is.

Some environmental conflicts at the international level are themselves primarily about property rights. An example of this is water conflicts, where one country controls the headwaters that flow to other countries further down the river. Here, negotiated deals, say, to maintain water flow relative to target levels in return for other concessions, could be brokered by a WEO. Documenting existing overlapping and inconsistent property rights where they occur may help resolve the situation. Suggesting ways to proceed where property rights are contested might also help.

We do not claim that a WEO could definitively resolve all international property rights issues. Coase, in any case, suggested that they lie outside of formal economics and rest on arguments of natural justice. The aim would be both to contribute to the alleviation of some disputes and to work with *de facto* rights on other cases through existing custody of assets.

The Problem of Free Riding

The problem of free riding can occur when the benefits of pollution control accrue to many different nations regardless of their behavior. By bargaining for environmental protection in another country, country A would assume all the costs of environmental protection, but environmental protection would benefit other countries as much as it would benefit country A. Nations would have an incentive not to enter into a deal, hoping that someone else would do it for them. For example, if countries, or groups within countries, hold existence value over forests abroad, and if bargained environmental deals were bilateral, countries could free ride on each other's deals, since the benefits from a deal committing a country to preserve its forests accrue to countries other than those that are party to it. Free riding greatly undermines the attractiveness of environmental deals at the global level, since the benefits of any pair of bilateral actions are spread much more widely.

Deals made only by subsets of affected parties would therefore be difficult to conclude and would likely span groups of countries with similar interests on both sides of the environmental resource. A strength of a WEO would be its potential ability to orchestrate simultaneous deals across groups of affected parties. This would further raise the degree of internalization of the global externality achieved in the deal through crossovers, and hence would reduce free riding.

As another example, all OECD countries may benefit from a species population target negotiated, say, in Cameroon by Germany (or a German NGO).

A WEO could help countries capture the benefits to others from free riding through multilateral rather than bilateral dealmaking, with packages of environmental deals put together in rounds of negotiation, much as the WTO utilizes crossovers of benefits in one area and costs in others in allowing countries to conclude mutually advantageous deals on trade barrier reduction.

A WEO could even aggressively seek out dealmaking opportunities by proposing a package of deals to consortia of interested parties, and in this way reduce free riding benefits.

The Problem of Time Consistency

Time consistency is a problem because an arrangement entered into by one government might not be honored by a later government that is either unwilling or unable to fulfill the terms of the agreement made to another state. If Brazil, for example, were to promise to restrain deforestation over some number of years in return for financial inflows, then if the funds were paid immediately, Brazil could request more funds after initial receipt. But if funds were to be paid at the end of the period, Brazil would have no assurance that payment would be forthcoming.

Some form of intermediary guarantor, therefore, seems needed by both sides to reduce the risks involved in bargained environmental transactions. A WEO could 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 were 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.

Problems of Contract Enforcement

Enforcing the environmental deals concluded within a World Environmental Organization would require robust procedural arrangements. Who ensures that a pledged environmental target has actually been met, and what are the remedies if this is not the case? Under a WEO, staff could monitor compliance on environmental commitments, and make determinations of whether or not commitments have been met. A set of agreed upon procedures for verification would be needed to this effect. 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.

Difficulty of Assembling Coalitions

There are difficulties in putting together coalitions for dealmaking aimed at reducing transaction costs. Often it is difficult to determine the benefits from deals, and hence who should be approached with dealmaking proposals. Preferences underlying deals need to be estimated and represented, because 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 are they to do this and with what effect? A WEO could play a role 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.

The Problem of Side Payments

It is often said that side payments do not occur to any significant degree in existing inter-country environmental arrangements, and that financial resource transfers from countries that belong to the OECD 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 resource transfers do occur, it is usually as a result of a country's being a signatory to one of the global treaties, such as the United Nations Framework Convention on Climate Change (UNFCCC), rather than as a negotiated environmental deal focused on internalization. Under the current system, negotiations occur for specific Conventions or Protocols, each addressing a major global issue. By encouraging ongoing negotiation and constant dealmaking between countries, a WEO would make side payments much more common.

Overview of the Role of a World Environmental Organization

We envision a World Environmental Organization that could undertake activities underpinning environmental dealmaking on a global scale, aiming at accounting for as many social costs of market transactions as possible. It would not have the 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.

A WEO could act as an intermediary on deals of the type sketched out in this chapter. It could receive and hold funds until determinations were made as to compliance (with either transfers to the custodian country, or return to the other country). A WEO could provide verification as to whether the terms of deals had been met, and act as a dispute settlement and arbitration vehicle. This would go much further than the Clean Development Mechanism of the Kyoto Protocol, which initiates and oversees North-South transactions on climate change with oversight by the Conference of the Parties (Sebenius, 1994).

A WEO could be proactive in identifying areas and countries between which 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.

In setting out our view of a WEO, we see a possible progressive graduation from weaker to stronger forms as the likely evolution. Such an entity in its strong form is unlikely to be implemented quickly, and the demand for it, as much as anything else, will reflect the level of concern for global environmental quality and the global costs stemming from lack of internalization.⁴

DEVELOPING ENVIRONMENTAL/NON-ENVIRONMENTAL POLICY LINKAGE

By bringing global environmental arrangements under a single bargaining 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 internal environmental management in return not only for cash, but also for improved trade access. A problem in making such concessions is how to do it within the existing patchwork quilt of global environmental arrangements. By systematizing these arrangements, a WEO could better facilitate bargains of this kind.

The WTO involves bargaining concessions on trade barrier reductions, but no cash is exchanged and only national governments may bargain. A WEO could go further. Cash for commitments could be allowed, and bargains would not be restricted to national governments. A WEO can be seen as a parallel and expanded bargaining framework for country and group concessions. Linkage to non-environmental issues, while a second or third step, implies that bargaining

⁴ In a parallel paper (Whalley and Zissimos, 2001), we set out three variants of a possible WEO progressing from weaker to stronger forms, which we suggest could be implemented gradually, moving from one to the next.

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 various issues on which groups want to exchange concessions.

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. They are fearful that a willingness to bargain indicates both a relaxation of this position and, implicitly, a concession on property rights. But the opposite is true.

A World Environmental Organization would give developing countries the opportunity to take advantage of their property rights and obtain resource transfers for environmental restraint. Thus, by providing institutional support for bargaining across issue areas, incentives to cooperate would be multiplied, and the basis for global environmental cooperation significantly broadened.

Underpinning Domestic Environmental Policy

An international environmental entity such as a WEO could also lend support to domestic groups (including NGOs) trying to raise levels of compliance with domestic environmental laws.⁵ Governments in countries with such problems, in turn, might be able to use the WEO as a masthead to support domestic policy change in the environmental area.

A WEO might also consolidate the information clearinghouse functions of the Commission on Sustainable Development (CSD), 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 the recognition that, in the past, compliance has been hampered by administrative weakness and poor institutional infrastructure.

⁵ If an NGO vehemently opposed a deal its national government entered into that was brokered by a WEO, it remains to be worked out whether the NGO should be able to appeal the case to the WEO. Our inclination would be to treat these as issues to be resolved within the domestic political process.

POSSIBLE FORM OF A WORLD ENVIRONMENTAL ORGANIZATION

Structure

- Head Office
- Governing Council
 - All WEO members would have a seat *
 - All sign protocol of accession to uphold all WEO decisions
- Chief Officer

Mandate

- To improve global environmental quality through structured environmental deals

Issues Covered

- All issues on which agents wanted to strike deals
- Primarily transboundary issues and global commons issues**

Services Offered

- Facilitation of deals
- Verification of deals
- Property rights verification
- Intermediation of financial arrangements
- Advancement of cross-country negotiations
- Initiation of proposals

Structure of Deals

- No set format for negotiations
- No principles or general rules
- Country-to-country, including non-state parties
- WEO notified once deals are completed

Possible Additional Activities

- Call for negotiating rounds on the environment
- Initiation of negotiations to streamline, codify current treaties
- Exploration of cross-linkage negotiations
- Exploration of whether WEO commitments might underpin domestic environmental policy

* Whether non-governmental organizations as well as countries would be members needs to be determined.

** Environmental issues within countries could also be dealt with but are more likely to be resolved through a process outside a WEO, since the impediments to successful bargaining are fewer.

POTENTIAL BENEFITS TO DEVELOPING COUNTRIES

While we see a WEO playing a central role in achieving improvements in the areas of global dealmaking, there could be additional potential benefits of the resulting environmental deals for developing countries. These benefits would be an important step in driving forward efforts at global environmental protection, considering that developing countries often see economic development and poverty alleviation as more urgent priorities and have traditionally been reluctant to embrace environmental treaties proposed by the developed world:

- Low-income developing countries may be able to obtain valuable resources for development by making commitments to undertake environmental protection at home;
- Negotiations could be about much more than the environment, since these countries will also be able to bargain collectively on both environmental and non-environmental dimensions of issues in a WEO, substantially enhancing their bargaining power;
- Issue linkage in negotiation between environmental and non-environmental areas would be made easier through a WEO, since these links require a level of coordination across sub-areas and regions in the environmental area that is currently difficult to imagine occurring without agency support;
- Opportunities may exist for countries experiencing difficulties in implementing their own domestic environmental policies to use the political support of an international entity such as a WEO to achieve their objectives;
- A WEO could act as a focal point for developing country coalition formation in negotiation. By formulating joint positions in WEO negotiations, developing countries with similar interests might be able to act together. Resource transfers to developing countries in return for strengthened environmental regimes might be more significant if developing countries were to bargain jointly through a WEO rather than as single countries.

POSSIBLE REASONS FOR CAUTION ON THE PART OF DEVELOPING COUNTRIES

Developing countries may, however, be cautious about such proposals. Their concerns would likely be:

- Whether advantages to them would be large enough to contribute significantly to development;
- Whether any new flow of funds and technology would justify the raised expectations of improved environmental performance;
- Whether an additional global “pressurizing agency” along the lines of the World Bank or the International Monetary Fund (IMF) might result;
- Whether growth and development might be slowed by taking on environmental commitments. The heterogeneity of both interest and circumstance across individual countries may further complicate a developing country reaction to our WEO proposal.

Caution toward a WEO may be a likely initial response, and one that has to be clearly acknowledged, but we would argue that potential gains remain. For now, the catalyst for a possible global environmental body is seen as the trade and environment conflict in the WTO, but we think this may change. If major additional global environmental damage occurs in the next few years and cooperation might have mitigated it, this could prove to be a more powerful catalyst.

CONCLUSION

The central aim of the World Environmental Organization we propose, regardless of the speed at which it evolved, would be to redress international environmental negotiation failures in a way that would move the global economy closer to achieving fuller internalization of global environmental externalities. Its overarching purpose would be to improve environmental quality worldwide. It is our contention that such an organization would provide more concrete benefits to the environment than any arrangement or organization that currently exists, and for that reason, we urge serious consideration of its merits by the international community.

REFERENCES

- Charnovitz, Steve. 1993. "The Environment vs. Trade Rules: Defogging the Debate." *Environmental Law* 23 (2): 475-517.
- Coase, Ronald H. 1960. "The Problem of Social Costs." *Journal of Law and Economics* 3 (1).
- Esty, Daniel C. 2000. "The Value of Creating a Global Environmental Organization." *Environment Matters* 6 (12): 13-15.
- Jospin, Lionel. 2002. "French Prime Minister Calls for Creation of New World Environment Organization." *International Environment Reporter* 25 (5): 213.
- Juma, Calestous. 2000. "The Perils of Centralizing Global Environmental Governance." *Environment Matters* 6 (12): 13-15.
- Panitchpakdi, H.E. Dr. Supachai. 2001. "Keynote Address: The Evolving Multilateral Trade System in the New Millenium." *George Washington International Law Review* 33 (3): 419-449.
- Ruggiero, Renato. 1998. *A Global System for the Next Fifty Years, Address to the Royal Institute of International Affairs*. London: Royal Institute of International Affairs.
- Runge, C. Ford. 2001. "A Global Environment Organization (GEO) and the World Trading System." *Journal of World Trade* 35 (4): 399-426.
- Sebenius, J. 1994. "Towards a Winning Climate Coalition." In *Negotiating Climate Change*, edited by I. Mintzer and J. Leonard. New York: Cambridge University Press.
- UNEP. 1996. *Register of International Treaties and Other Agreements in the Field of the Environment*. Nairobi, Kenya: United Nations Environment Programme.
- von Moltke, Konrad. 2001. "The Organization of the Impossible." *Global Environmental Politics* 1 (1).
- Whalley, John, and Ben Zissimos. 2001. "An Internalization Based World Environment Organization." Centre for the Study of Globalisation and Regionalisation, University of Warwick, Warwick.

John Whalley is Professor of Economics at both the University of Warwick, UK and the University of Western Ontario, Canada. At Warwick, he is Co-Director of the Centre for the Study of Globalisation and Regionalisation and at Western Ontario, he is Co-Director of the Centre for the Study of International Economic Relations. He is a Fellow of the Royal Society of Canada and of the Econometric Society, a Research Associate of the National Bureau of Economic Research, in Cambridge, Massachusetts, and the joint managing editor of the journal *The World Economy*. He has published widely, and is best known for his contributions to applied general equilibrium analysis, and trade and tax policy. In recent years he has worked on environmental issues, producing one of the earliest and most widely cited studies (jointly with Randy Wigle) on carbon taxes.

J.Whalley@warwick.ac.uk
<http://www.warwick.ac.uk/>
<http://www.uwo.ca/>

Ben Zissimos is a Research Officer in the Warwick Centre for Public Economics and an Associate of the Centre for the Study of Globalisation and Regionalisation at the University of Warwick. His research interests cover questions of international policy conflict and cooperation, examining the implications of tax competition and issues related to the formation of environmental and trade agreements. He has published on the strategy and efficiency implications of tax competition, permit trading under environmental agreements, a possible role for a World Environmental Organization, and trade block formation under the World Trade Organization.

b.c.zissimos@warwick.ac.uk
<http://www.warwick.ac.uk/~ecsf/>