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The WTO as an environmental agency

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1. Introduction

This chapter provides an overview of the "trade and environment" issue in the World Trade Organization (WTO) and recent developments in related WTO jurisprudence. My study was prepared as part of a research project organized by United Nations University to examine the interplay of international trade and biosafety with special reference to the new Cartagena Protocol on Biosafety. Recently, an article in the *Journal of World Trade* criticized the Protocol as "a club for agricultural protectionists" (Hobbs et al. 2005: 297), and it remains to be seen how a governmental decision taken pursuant to the Protocol would fare if challenged in WTO dispute settlement.

The editors of this volume made a wise choice in commissioning this chapter from Konrad von Moltke, one of the most respected and popular analysts of international environmental policy during the past quarter-century. Back in 1990, when I first began writing about the intersection of trade and environment, Professor von Moltke was one of the few scholars in the world to whom one could turn for guidance, because he had already given considerable thought to the looming clash. He was happy to tutor me, and soon became a good friend. Coming as I did from the trade side of the debate, Konrad seemed to relish the opportunity to explain to me how to integrate environmental analysis into a trade perspective. After he tragically passed away in May 2005, I joined others in a global email conversation to lament this loss.

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When the editors of this volume asked me to substitute for von Moltke in writing this chapter, I recalled his inimitable style and his important papers on trade and environment (e.g. von Moltke 1993, 1996). Readers of von Moltke were always treated to a fresh and integrative approach to any new issue he tackled. We also gained from his ability to think out of the box and put forward a provocative thesis that would cause readers to rethink their assumptions. Inspired by Konrad's example, I offer a daring thesis here – that we should visualize the WTO as an environmental agency.

The chapter is structured as follows. Section 2 provides a brief review of the history of the environment linkage in trade policy, beginning in 1923. Section 3 presents my thesis that the WTO should have a positive environmental role. Section 4 looks at the many ways that the environment already features in WTO rules and case law. It also provides an overview of how trade rules may hinder environmental policy. Section 5 looks at the environmental components of the WTO's Doha Round negotiations. Section 6 presents the concept of the multifunctional international organization and explains why the traditional paradigm of the WTO as a trade-only agency needs to be replaced by a new paradigm. Section 7 concludes.

2. Background on the trade–environment linkage

At its origins in the 1920s, the trading system sought to avoid interfering with national health and environmental policy measures. The first multilateral treaty on trade, the Convention Relating to the Simplification of Custom Formalities of 1923, contained a provision stating that the disciplines of the treaty did not "prejudice the measures which contracting parties may take to ensure the health of human beings, animals or plants" (Customs Simplification Convention 1923: Article 17). The next major treaty was the Convention for the Abolition of Import and Export Prohibitions and Restrictions of 1927. The drafter of the Convention wrote in an exception for "prohibitions or restrictions imposed for the protection of human health and for the protection of animals and plants against disease, insects and harmful parasites" (Trade Prohibitions Convention 1927: Article 4.4). After the treaty was negotiated, there was some concern about whether this exception was sufficiently capacious. Therefore, a Protocol was added to clarify that this exception "also refers to measures taken to preserve them [animals and plants] from degeneration or extinction and to measures taken against harmful seeds, plants, parasites and animals" (Trade Prohibitions Convention 1927: Protocol, ad Article 4(a)). The Protocol makes clear that, even by 1927, govern-

ments were thinking about the repercussions of international trade rules on biodiversity and biosafety.

When governments negotiated the General Agreement on Tariffs and Trade (GATT) and the Charter of the International Trade Organization (the Havana Charter), 20 years later, there were a sufficient number of multilateral environmental agreements in place with specific trade objectives that the treaty drafters took care to add a general exception for measures "taken in pursuance of any inter-governmental agreement which relates solely to the conservation of fishery resources, migratory birds or wild animals" (Havana Charter 1948: Article 45(1)(a)(x)). The immediate post–World War II period had been an active time for international environmental policy-making, with the negotiation of the Whaling Convention of 1946, the Fishing Nets Convention of 1946, the Pan American Nature Protection Convention of 1948, and the constitutive act of the International Union for the Conservation of Nature and Natural Resources of 1948.

Unfortunately, the Havana Charter failed to come into force. In its place, the GATT remained the fundamental law of the trading system until the WTO came into being in 1995.

The GATT had little involvement with environmental issues until the early 1970s. In 1971, the GATT Secretariat prepared a report on "Industrial Pollution Control and International Trade" as an intellectual contribution to the forthcoming United Nations Conference on the Human Environment. Also that year, the GATT established a standby Group on Environmental Measures and International Trade. In addition, the GATT Secretariat gave technical advice to the drafters of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) on how to make its trade obligations GATT consistent (Boardman 1981: 89–92).

The GATT Group took 20 years to hold its first meeting, and that occurred following a growing chorus of public concern that the GATT might be acting in an environmentally blind way. The Group met intermittently over the next couple of years until it was replaced in 1995 by the WTO Committee on Trade and Environment (CTE). In the years since the issue of the environment returned to the GATT in 1990, one can see that the efforts in the GATT and the WTO to consider environmental linkages have contributed to a better understanding of those challenges and to better coordination of policy-making at the national level (Shaffer 2001).

The scholarly output on "trade and the environment" is extensive and includes contributions from lawyers, economists, international relations specialists and scientists.[1] In this short chapter, I will not try to summarize that literature or to detail the many ways in which trade flows affect

the environment[2] or in which environmental measures may restrict trade. Instead, I move directly to a new thesis about the WTO's role.

3. The case for a WTO environmental role

In its 2004 pamphlet entitled *Trade and Environment at the WTO*, the WTO Secretariat declares that one of the "parameters" for WTO discussion of trade and environment is that the "WTO is not an Environmental Protection Agency" (WTO 2004: 6). The Secretariat may be right that such a proposition underlies current thinking inside the WTO. Nevertheless, I doubt the accuracy of the proposition itself. In some ways, today's WTO is already an environmental agency and is becoming more of one.

My new thesis cuts against the grain. The traditional thinking is that the WTO is a trade liberalization agency and its success in performing that mission depends on maintaining its distinctive function. Many officials at the GATT and the WTO have sought to reassure environmentalists worried about the expanding reach of the trading system that the WTO has no interest in setting environmental rules or in the competence to do so. Along those lines, the Uruguay Round "Decision on Trade and Environment" asserts that the "competence of the multilateral trading system" is "limited to trade policies and those trade-related aspects of environmental policies which may result in significant trade effects for its members" (WTO 1994a).

The WTO has been colourfully described over the past decade, but I do not recall anyone giving it the appellation of "environmental agency". An excellent volume on the WTO published in 1998 was titled *The WTO as an International Organization* (Krueger 1998). Yet even that volume, edited by the eminent free-trader Anne Krueger, contained chapters on non-traditional topics such as "domestic political objectives" and "environmental and labour standards".

In considering whether the WTO is or is not an environmental agency, one should reflect on what it means to be an environmental agency (or an environmental protection agency). In my view, an environment agency is an agency that (1) makes assessments of environmental needs; (2) decides the level of environmental protection to be sought; or (3) selects the appropriate measures for achieving it.

By that definition, the WTO is an environmental agency.[3] Its scope of oversight potentially includes any governmental environmental measure (of a WTO member country) that affects trade. Under current rules, the WTO is certainly engaged in the third task and can perform the second to the extent that it requires countries to use international standards. The

WTO is not currently making assessments of environmental needs, but this could arise in the Doha Round negotiations.

In calling the WTO an environmental agency, I am not suggesting that such a descriptor is the best one for the WTO. The beginning of wisdom is to recognize that the WTO is multifunctional. It is primarily a trade liberalization agency, but it also plays an overlapping role in many regimes. As noted in the 2003 "Final Declaration" of the Parliamentary Conference on the WTO, organized jointly by the Inter-Parliamentary Union and the European Parliament, the "WTO is rapidly becoming more than a mere trade organisation" (Parliamentary Conference on the WTO 2003: para. 8).

Besides being a trade liberalization agency, the WTO has taken on additional identities. The WTO is an agriculture agency that addresses food aid (Zhang 2004). The WTO is an intellectual property agency.[4] Since the Doha Ministerial Conference of 2001, the WTO has become a development agency too.[5]

In calling the WTO an environmental agency, I am placing the WTO within the rather large population of international environmental agencies. Indeed, the fragmented nature of world environmental governance has become a serious problem and one in need of organizational reform (von Moltke 2005). Besides the WTO, the World Bank is another major multifunctional agency with an environmental mission.

How essential is my thesis to this study? For much of the descriptive and analytical material to be presented below, my thesis is not critical. The WTO will be a conditioning factor in biosafety policy whether or not one views the WTO as an environmental agency. Where my thesis is critical is in the discussion of how better to integrate trade and environmental law and how to transform the WTO into a pro-environment agency.

My thesis would be objected to by many. Some analysts take the view that the WTO should be only a market access agency. The economist Robert Staiger has taken that position in his thoughtful scholarship on the WTO. Staiger would be the first to acknowledge that the WTO of today has strayed from that singular mission, and he recommends disentangling trade from other issues and refocusing it on "securing market access property rights" (Staiger 2004: 13).

Yet if the WTO is exclusively a market access property rights agency, aloof from the environment regime, then that separate positioning facilitates the erroneous view that trade law is superior to environmental law.[6] The danger in allowing the WTO to view itself as outside the environment regime is that the WTO can just say "no" to a national environment or public health measure without taking any responsibility for the

repercussions of its decision and, when warranted, getting the parties to a "yes". International governance can be dysfunctional when negative decisions may be taken in one international organization without any connection to whether positive decisions are taken in a parallel organization.

For 20 years or so, the paradigm for how the trading system interacts with environmental (and other "non-trade") issues has been "linkage" (see Alvarez 2002). Analysts have focused on the policy tensions that develop when the trade regime pursuing its own objectives crosses paths with the environment regime pursuing its own objectives.[7] The underlying assumption in the linkage paradigm is that the trading system is about trade, not about environment, and so environmental claims can enter only via linkage. Yet for many governments and stakeholders in the trade community, linkage is a dirty word and not one that is gaining in popularity.

The time has come to escape from the mental imprisonment of linkage. Back in 1992, the governments drafting *Agenda 21* for the United Nations Conference on Environment and Development (UNCED) stated that the "international community should: ... Ensure that environment and trade policies are mutually supportive, with a view to achieving sustainable development" (UNCED 1992: para. 2.10(d)). This notion of mutual supportiveness has been repeated in other intergovernmental statements and yet, even some 15 years later, governments have not made much progress in thinking through what it means for trade policy to be mutually supportive with environmental policy (and vice versa). Over the years, excellent books have been written about "The Greening of World Trade Issues", "Greening the GATT" and "The Greening of World Trade Law". In section 4 I consider how much the trading system has been greened.

4. The environment in WTO law

The WTO's attention to the environment starts at the beginning of the WTO treaty. In the Preamble to the Agreement Establishing the WTO, the parties act to establish the WTO,

> Recognizing that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living,... while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent

> with their respective needs and concerns at different levels of economic development. (WTO 1994b: Preamble)

In the *Shrimp* case, in 1998, the Appellate Body drew attention to this provision and used it to help interpret the general exceptions in GATT Article XX. The appellators famously stated that the Preamble "informs" all of the WTO trade agreements and "explicitly acknowledges 'the objective of *sustainable development*'".[8] In reference to this and other language in *Shrimp*, Professor John Jackson calls that decision "a constitutional door opener for approaches that require a broader perspective than just the four corners of the very extensive GATT/WTO treaty language" (Jackson 2005: 40).

Because of the controversy surrounding the *Shrimp* case and the fact that the jurists ruled against the US conservation measure being challenged, the Appellate Body included a coda at the end of its holdings to underscore what it had not decided. According to the Appellate Body,

> We have *not* decided that the protection and preservation of the environment is of no significance to the Members of the WTO. Clearly, it is. We have *not* decided that the sovereign nations that are Members of the WTO cannot adopt effective measures to protect endangered species, such as sea turtles. Clearly, they can and should. And we have *not* decided that sovereign states should not act together bilaterally, plurilaterally or multilaterally, either within the WTO or in other international fora, to protect endangered species or to otherwise protect the environment. Clearly, they should and do.[9]

Two features of this holding should be noted. First, the Appellate Body declares that states "should" adopt effective measures to protect endangered species. Perhaps that statement can be written off as a rhetorical flourish. Second, the Appellate Body seems to be suggesting that states can and perhaps should act together plurilaterally or multilaterally *within the WTO* to protect endangered species or otherwise to protect the environment. That statement is harder to overlook. It has to reflect an assumption by the Appellate Body that such collective action within the WTO would be consistent with the WTO's competence.

In the follow-up compliance dispute in *Shrimp*, the Panel held that "sustainable development is one of the objectives of the WTO Agreement".[10] This remarkable statement drew no criticism when the WTO Dispute Settlement Body adopted the Panel decision. To be sure, there is a difference between a holding that "sustainable development" is a WTO objective and a holding that environmental protection is a WTO objective. Yet, had I limited my thesis in this chapter to a proposition

that the WTO is a sustainable development agency, that too would have been a major departure from the conventional view that the WTO is merely a trade agency.[11]

In its 1998 *Shrimp* ruling, the Appellate Body took note of the Uruguay Round "Decision on Trade and Environment", and held that this Decision can "help to elucidate the objectives of WTO Members with respect to the relationship between trade and the environment".[12] In particular, the Appellate Body quoted from the terms of reference for the Committee on Trade and Environment, which include whether to make recommendations for modifications of WTO provisions as regards, in particular,

- the need for rules to enhance positive interaction between trade and environmental measures, for the promotion of sustainable development, with special consideration to the needs of developing countries, in particular those of the least developed among them; and
- the avoidance of protectionist trade measures, and the adherence to effective multilateral disciplines to ensure responsiveness of the multilateral trading system to environmental objectives set forth in *Agenda 21* and the Rio Declaration, in particular Principle 12. (WTO 1994a)

This mandate admits of more than one interpretation. At the very least, it shows that governments agreed to assess whether the WTO should have provisions to achieve *positive* interaction between trade and the environment, to promote sustainable development and to ensure WTO responsiveness to international environmental objectives. A more expansive view is that WTO rules already promote those goals and the issue to be decided is whether those rules should be enhanced. So far, the Committee has not made decisions either way.

The WTO comprises 24 covered agreements and other understandings that are part of a single undertaking. Many of these agreements contain provisions relating to the environment. The WTO Secretariat boasts of them as the WTO's "green provisions" but does not define that term.[13]

In thinking about what renders a WTO provision green (i.e. pro-environmental), one should first recall the range of environmental policy instruments used by governments. They include: regulations, taxes, standards, labelling, subsidies and other technology incentives, trade controls, allocation and clarification of property rights, reporting and accountability for private actors, and environmental diplomacy. These instruments may be used to control pollution, manage natural resources or otherwise maintain the availability and quality of public goods.

Although WTO law does not directly dictate what the goals of a government's environmental policy should be or what instruments can be

used, the scope of WTO law is broad enough to influence those choices in at least two ways. First, the WTO can influence environmental decision-making by facilitating economic growth through trade. The higher ensuing incomes *may* then lead to higher environmental quality by increasing the society's income and perhaps by catalysing greater public demand for environmental quality. Second, WTO law provides a background rule that removes policy space from governments to use environmental measures in certain ways. In other words, if environmental policy consists of active measures to achieve chosen environmental goals, then WTO law consists of passive restraints on the measures used. I suggest that a third mode of influence is also feasible: WTO law should be used to promote better environmental outcomes.

I shall now provide an overview of the environmental provisions present in WTO law, and some that are notably absent. WTO law contains three discrete areas of law, pertaining to trade in goods, trade in services, and trade-related intellectual property. The three areas are subsumed under the umbrella WTO treaty and share a common dispute settlement mechanism. I will discuss each area in turn.

4.1. Trade in goods

In applying its environmental policy to imported goods/products, a government must ordinarily follow the principles of most-favoured-nation (MFN) and national treatment. MFN treatment means that an imported product from a WTO member is not to be treated less favourably than a like imported product from any other country. National treatment means that an imported product is not to be treated less favourably with respect to a regulation than the like domestic product. With taxes, the rule is similar but a bit more strict. Although the WTO Secretariat has taken the position that regulations and taxes cannot be hinged on the upstream effects of production,[14] no authority exists in trade law for that proposition, and many environmentalists hope that WTO law will be flexible enough to accommodate such process-related measures. Another major trade rule for imported products is that quantitative restrictions such as import bans are generally prohibited. This rule would seem to apply to import bans dictated by a multilateral environmental agreement (MEA), but that point has not yet arisen in dispute settlement.

If a government has a good reason for violating MFN, national treatment or the prohibition of import (or export) bans, that government may be able to defend its measure by qualifying for one of the exceptions in GATT Article XX (GATT 1947). The WTO Secretariat sometimes forgets this.[15] Two exceptions are most applicable to environmental policy: Article XX(b) for measures "necessary to protect human, animal or

plant life or health" and XX(g) for measures "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption". Both exceptions are subject to the requirement in the Article XX chapeau that "such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade". Under WTO case law, a government seeking to claim one of these environmental exceptions has the burden of proof.

The trend in Article XX case law is for a more economic-based interpretation of the term "necessary". In the *Korea Beef* case, the Appellate Body held that, for a measure to be "necessary", it has to pass a "weighing and balancing process" in which a Panel in every case has to consider three "factors": (1) the importance of the value protected by that law or regulation, (2) the contribution made by the contested measure to the end pursued, and (3) the restrictive impact of the measure on imports.[16] Furthermore, the Appellate Body stated that this weighing and balancing process is comprehended in the determination of whether there is a WTO-consistent or less-WTO-inconsistent measure available that the government could reasonably be expected to employ.

This weighing and balancing test was not part of pre-1995 trade jurisprudence and has troubling implications for national health or environmental policy. One problem is that the test necessitates inter-country comparisons of utility in weighing, say, the health of one country versus the trade of another. Although national courts will sometimes weigh domestic health versus trade, having an international court do inter-country weighing is unusual. Because this task goes beyond what one would expect to be within the scope of a world trade court, the evolution of WTO case law may show that the Appellate Body is simultaneously also becoming a world court with jurisdiction over health and environment.

In addition to qualifying for a GATT General Exception, governments may derogate from the MFN requirement through three kinds of preferential trade arrangements: customs unions, free trade agreements (FTAs), and the generalized system of preferences (GSP) for developing countries. The establishment of customs unions has sometimes been accompanied by positive environmental harmonization, the leading example being the European Union and its predecessor communities. Some FTAs have included environmental cooperation, the leading example being the North American Free Trade Agreement and its parallel side agreement. The only GSP programme with an environmental component is the European Union's programme. Since 2001, it has included "special incentive arrangements for the protection of the environment", which apply to products of a tropical forest originating in countries that effectively apply

national legislation that incorporates internationally acknowledged standards and guidelines concerning sustainable management of tropical forests (Council of the European Union 2001: Articles 21–24).

So far, this GSP environmental arrangement has not been challenged in WTO dispute settlement. Nevertheless, when India won its challenge in 2004 against the feature of the European GSP related to drug production and trafficking, the Appellate Body held that the WTO "enabling clause" for GSP requires a tariff-preference-granting country to "respond positively" to the particularized "development, financial and trade needs of developing countries".[17] This holding can be read as permitting the European Union's preference relative to products from sustainably managed tropical forests if sustainable timber management is considered to be a development need. If sustainable timber management is not considered a development need, then the Appellate Body's holding would seem to disallow that sort of environmental condition in a GSP programme.

In addition to being subject to the GATT, environmental regulations applying to imported products will also be subject to the WTO Agreement on Technical Barriers to Trade (TBT Agreement). This Agreement has numerous rules, only a few of which will be discussed here. A technical regulation is broadly defined as a government document laying down product characteristics or their "related processes and production methods" (TBT Agreement 1994: Annex 1.1). One core rule is that a governmental regulation "shall not be more trade-restrictive than necessary to fulfil a legitimate objective, taking account of the risks non-fulfilment would create" (TBT Agreement 1994: Article 2.2). Although no case law yet exists, one expert has argued that this rule requires that, when a regulation is claimed to be based on science, the regulator will need to have a risk assessment (see Motaal 2004: 857–859).

Another core TBT rule is that, when a relevant international standard exists, a government's technical regulation shall use that international standard as a basis for its regulation, unless the standard would be "an ineffective or inappropriate means" for the fulfilment of a legitimate objective (TBT Agreement 1994: Article 2.4). Standards are defined broadly and include environmental product standards. A "legitimate objective" is defined to include "protection of human health or safety, animal or plant life or health, or the environment" (TBT Agreement 1994: Article 2.2). Although a textual reading of the TBT Agreement suggests that its rules on international standards apply only to standards based on consensus, the Appellate Body has held that no consensus is required and thus that a standard determined through voting will be enforceable by the WTO.[18]

The commentary on the TBT Agreement emphasizes how the rule on international standards can undermine a government's effort to employ a

regulation that seeks a higher level of protection than the international standard. Yet one should also recognize that this rule could possibly work in the opposite direction too. That is, the TBT Agreement could require laggard governments to move up to an international standard. Note, however, that the TBT Agreement (Article 12.4) states that developing countries may adopt regulations "aimed at preserving indigenous technology and production methods and processes compatible with their development needs" and that "developing country Members should not be expected to use international standards ... which are not appropriate to their development, financial and trade needs".

The TBT Agreement also contains rules to encourage governments to provide regulatory assistance to developing countries. Assistance is to be provided on the "preparation" of regulations and on the "methods" by which regulations can be met (TBT Agreement 1994: Articles 11.1, 11.3.2). So far, very little implementation has occurred.

For certain health-related regulations, TBT rules are supplanted by the Agreement on the Application of Sanitary and Phytosanitary Measures (SPS Agreement). Any measure covered by the SPS Agreement is carved out of the TBT Agreement. Given the considerable literature on SPS rules and their relation to biosafety and precaution,[19] and the new analyses elsewhere in this volume (see, e.g., Gupta, Chapter 2), the discussion here on SPS will be brief.

The SPS Agreement applies to regulations or import bans used to protect human, animal or plant life from a specific list of risks. A WTO member government may choose its desired level of protection, but "shall avoid arbitrary or unjustifiable distinctions in the levels it considers to be appropriate in different situations, if such distinctions result in discrimination or a disguised restriction on international trade" (SPS Agreement 1994: Article 5.5).[20] Member governments have considerably less autonomy in selecting SPS measures. Such measures are to be based on scientific principles and not maintained without sufficient scientific evidence, but the Agreement contains a clause (SPS Agreement 1994: Article 5.7) to provide flexibility in instances where relevant scientific evidence is insufficient. According to the Appellate Body, the precautionary principle "finds reflection" in that clause.[21]

The SPS Agreement privileges international standards set by the Codex Alimentarius Commission, by the International Office of Epizootics, and under the auspices of the International Plant Protection Convention. Governments must base their SPS measures on such standards, but may seek a higher (or lower) level of protection if there is a scientific justification or if the national standard meets all other SPS rules, including a trade-restrictiveness requirement that was drafted to be less onerous than the one in the TBT Agreement. Because the SPS Agreement relies

upon international standards that need not be consensus standards (e.g. Codex standards), the WTO has the potential to become the enforcer of rules that not all WTO members have accepted.

Another policy instrument governed by the WTO is a government subsidy. The Agreement on Subsidies and Countervailing Measures (SCM Agreement) prohibits non-agricultural subsidies that have specificity and that cause "adverse effects to the interests" of WTO member countries (SCM Agreement 1994: Article 5). Originally, the SCM Agreement exempted certain environmental subsidies from this prohibition, but that derogation expired at the end of 1999, and WTO governments did not renew it (SCM Agreement 1994: Articles 8.2(c), 31). The exempted subsidies were for assistance to promote adaptation of existing facilities to new environmental requirements. According to the WTO Secretariat, the original provision was "intended to allow Members to capture positive environmental externalities when they arose".[22] Its expiration leaves subsidies to correct market failure subject to being challenged as WTO violations. So far, none has been.

Agricultural subsidies are governed by complex rules in the Agreement on Agriculture (1994), which commit countries to limit and reduce subsidies. For some environmental subsidies that have no trade-distorting effects, no reductions in support are required (the so-called "green box"). The Preamble of the Agreement on Agriculture suggests that its commitments have been made with regard to "the need to protect the environment".

4.2. Trade in services

The General Agreement on Trade in Services (GATS) can have significant environmental consequences. A key environmental plus is that the GATS may help enable governments to be more open to the importation of environmental services. The GATS also facilitates the movement of natural persons both to consume services (e.g. to attend a foreign university to study environmental science) and to deliver services (e.g. trained environmental technicians who provide assistance in another country).

Counterbalancing these positive repercussions from the GATS are the new disciplines that governments agree to accept. Environmental measures in the form of regulations, taxes or import bans will be subject to numerous GATS rules. For the most part, the GATS rules apply only to sectors where a government makes commitments.

In contrast to the GATT, which has two environment-related general exceptions, the GATS has only one. That exception applies to measures necessary to protect human, animal or plant life or health. This means

that the GATT's environmental exception for conservation does not exist in the GATS (Waskow 2003: 793–795).

Although no environment disputes have yet arisen in the GATS, the absence of a conservation exception may make it hard to defend an environmental regulation subject to a dispute in the WTO. Challenging an environmental regulation was made easier by a recent Appellate Body decision holding that criminal laws prohibiting noxious services can be considered a zero quota that violates GATS Article XVI (Market Access).[23] This surprising holding came in the *Gambling* decision, in which three US laws banning Internet gambling were found to violate Article XVI, despite the fact that they were applicable *de jure* to domestic as well as to cross-border gambling services.

The governments that negotiated the GATS missed an opportunity to accord deference to the environment regime in the same way that deference is accorded to other regimes. For example, the GATS provides full deference to the rights and obligations of members of the International Monetary Fund and full deference to multilateral agreements to avoid double taxation (GATS 1994: Articles XI.2, XIV(e)). No analogous provisions exist for the environment.

The GATS does not define "services", an omission that has led observers to question whether certain environmental rights are to be considered services under the Agreement. For example, does a GATS-covered service include a right to pollute (e.g. an emission reduction unit), a right not to be polluted, or a right to exploit a natural resource (e.g. a fishery quota)? In my view, such government-created rights are not covered services, but no official interpretation yet exists.

4.3. Intellectual property

The third fount of substantive WTO law is the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS Agreement 1994). This Agreement mandates a minimum level of intellectual property protection that WTO member governments must provide to nationals of other WTO members. On some matters, TRIPS mandates that governments follow certain requirements of pre-existing intellectual property treaties. On other matters, TRIPS prescribes its own minimum requirements (UNCTAD–ICTSD 2005).

Patenting is the field of intellectual property most likely to have a significant effect on environmental and health quality. Under the TRIPS Agreement, governments are required to issue patents in all fields of technology, but "may exclude from patentability inventions, the prevention within their territory of the commercial exploitation of which is nec-

essary to protect *ordre public* or morality, including to protect human, animal or plant life or health or to avoid serious prejudice to the environment, provided that such exclusion is not made merely because the exploitation is prohibited by their law" (1994: Article 27.2).[24]

The effects of TRIPS on the environment will likely be mixed. A positive effect on the availability of technology is to be expected if longer patent terms lead to more innovation. On the other hand, a negative effect may ensue in lower-income countries if there are higher costs of obtaining products of foreign innovation (Nadal 2005: 22). The technology attracting almost all of the attention up until now has been pharmaceuticals (see Abbott 2005).

Despite its authority to cooperate with other international organizations, the Council for TRIPS has failed to act on some requests for observer status by major environmental agencies. For example, the Council has not given observer status to the United Nations Environment Programme or to the Secretariat for the Convention on Biological Diversity.

4.4. The WTO's structural provisions

Although the environment is not mentioned in the Agreement Establishing the WTO beyond the text of its Preamble, and is not mentioned in the WTO Dispute Settlement Understanding, there are two ways in which the WTO's structural provisions have implications for the environment.

For those countries that were not original members of the WTO, joining the WTO comes through an accession negotiation. A country seeking to join may do so only "on terms to be agreed between it and the WTO" (WTO 1994b: Article XII.1). This provision makes clear that it is the WTO itself that has the authority for proposing the entry terms. Because almost every country today wants to join the WTO (even North Korea has now sought observer status), the WTO has considerable leverage in those accession negotiations. Unfortunately, there is little public debate as to how that bargaining surplus should be used.

In the biggest accession negotiation so far, that of China, the WTO used its leverage to insist on both WTO-minus and WTO-plus provisions. WTO-minus provisions are when the WTO asks the applicant country to forgo certain rights that it would normally enjoy as a member. For example, the WTO did this on textiles and apparel trade in order to allow WTO members to engage in protectionist practices toward China for several years (Financial Times 2005: 18). WTO-plus provisions are when the WTO asks the applicant government to agree to rules beyond those required of WTO members. For example, the WTO did this to China in asking it to commit not to impose performance requirements of any kind on inward foreign investment (Qin 2003: 503).

Because of its position of power, the WTO can use its bargaining leverage for any issue it wants. Ideally, the WTO should use that leverage for a public benefit. In particular, the WTO should be promoting general interests rather than special interests. Telling general from special may not always be easy, but giving balm to European and US textile manufacturers hardly seems a general interest. Instead, the WTO should have used its leverage to promote political freedom in China. Another possibility was to use its leverage to convince China to remediate its industrial practices that cause harmful environmental effects on other countries (see Greenwire 2004).

The other WTO structural provision relevant here is the compliance measures available in the dispute settlement process if a WTO member loses a case and refuses to comply. Should that occur, the winning plaintiff may vindicate its victory by suspending trade concessions or other WTO obligations. For example, in the *Hormones* case, because the European Union has not complied, the United States and Canada are imposing 100 per cent tariffs against a range of goods. Yet, under current WTO practice, no review occurs of what products a government chooses to target. Perhaps a review should be undertaken of the projected environmental or human rights impact of the anticipated trade sanctions.

That completes the discussion of the most significant environmental features of the WTO treaty and the emerging case law. The other way in which the WTO has become an environmental agency is in including some environmental issues in the negotiating agenda for the Doha Round. Section 5 covers these developments.

5. The environment in WTO negotiations

Although previous multilateral trade rounds had given marginal consideration to the environment, the Doha Round marks the first time that the environment has been explicitly included on the negotiating agenda. To be sure, the environment is only a small aspect of the Round. Nevertheless, these features are important and will be discussed below.

5.1. Fishing

The Doha agenda commits governments to "clarify and improve WTO disciplines on fisheries subsidies, taking into account the importance of this sector to developing countries" (WTO 2001: para. 28). Although one could conceptualize a negotiation on fisheries subsidies as merely a commercial issue, the Doha Ministerial Declaration cross-lists the negotiations under the category of "Trade and environment". That makes sense

because there are significant environmental benefits of removing subsidy-driven trade distortions in the fisheries sector (see WTO Secretariat 2000). Indeed, the 2005 WTO Annual Report characterizes the negotiations as being "aimed at restricting environmentally harmful fishing subsidies" (WTO 2005: 153). For some analysts, the fishery negotiations go too far in flirting with environmental conditionality (see Grynberg and Rochester 2005).

5.2. *Environmental goods and services*

Another important environment-related issue on the Doha agenda is the negotiation for the reduction or elimination of tariff and non-tariff barriers to environmental goods and services (Sampson 2005: 141). Although such negotiations are a trade liberalization objective, they are also an environmental objective, and the environmental benefit may be just as significant as the trade benefit. After all, current barriers to trade in, say, pollution control technology could not possibly be beneficial for the environment.

5.3. *Win–win–win scenarios*

A third environment-related feature is attention to "situations in which the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development" (WTO 2001: para. 32(i)). This provision was welcomed by environmentalists, who saw in it the possibility of WTO scrutiny of particular sectors and were pleased with the allusion to a "win–win–win" scenario (which in the business community is termed the "triple bottom line"). In a meeting of the Committee on Trade and Environment in special session in May 2007, the governments discussed a "non-paper" by a group of high-income countries identifying 153 environmental goods that could be negotiated. Unfortunately, the paper itself is being kept confidential by the WTO Secretariat.[25]

Although some sectoral policy was written into the WTO treaty – most notably in agriculture, textiles and clothing, and telecommunications – not much consideration has been given to reorganizing the WTO's environment work into sectors. Several sectors could benefit from more integrated attention, including, for example, aquaculture and fisheries, chemicals, energy goods and services, environmental goods and services, forestry, mining, tourism, and transport. For each sector, governments could consider how to improve environmental quality through WTO rules on subsidy reduction, regulations and standards on goods, regulations and standards on services, and technical assistance for developing

countries. In that connection, the WTO could develop a list of recognized standard-setting bodies engaged in the development of environmental standards (see Chambers 2004: 81).

5.4. Multilateral environmental agreements

WTO members are negotiating on the relationship between WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs). This issue is important because, although MEAs have been using trade controls for over a century, there is a body of opinion inside the WTO that such controls are a violation of WTO rules and should no longer be permitted as environmental instruments. Many WTO member governments probably agree with Alan Oxley, a former GATT Council chairman, who has criticized leading MEAs for using "trade coercive measures" that disregard "national sovereignty" (Oxley 2004: 93–96). That opposition to trade measures in MEAs seems to have deterred the inclusion of trade controls in new MEAs. Other than the Stockholm Convention on Persistent Organic Pollutants (2001), no recent MEA contains specific trade obligations.

Although there was some hope by environmentalists that this threat to MEAs could be eliminated in the new trade round, the Doha agenda is highly circumscribed and is unlikely to lead to any fruitful outcome. Specifically, the governments have precluded any negotiation on trade measures applying to *non-parties* to the MEA and any result that would "add to or diminish the rights and obligations of members under existing WTO agreements" (WTO 2001: para. 32). In other words, the negotiators cannot propose changes to WTO rules.

When MEAs apply trade measures to non-parties, they can do so in two ways. One is to apply the same measure to a non-party as the MEA applies to a party (e.g. CITES). The other is to apply a discriminatory measure against a non-party (e.g. the Montreal Protocol on Substances that Deplete the Ozone Layer). Both are controversial within the WTO, but the second, involving discrimination, is more controversial. This stance seems hypocritical because the WTO provides space for discrimination against its non-parties. WTO member governments are permitted to discriminate against non-members with impunity. Even worse, when the WTO negotiates an accession agreement with a non-member (e.g. China), the WTO may insist that the applicant country accepts discrimination against it as a condition for joining.

Recently, a team of environmental analysts offered a good suggestion for "shifting the hapless debate within the CTE around MEAs toward a useful purpose" (Carpentier et al. 2005: 249). They recommend that the WTO look at each MEA and consider what particular trade liberaliza-

tion, in goods and services, would help to meet the objective of that MEA.

5.5. *TRIPS and biodiversity*

Although not listed as an environmental issue, the relationship between the TRIPS Agreement and the Convention on Biological Diversity is included on the Doha agenda as an action item for the WTO Council on TRIPS. Specifically mentioned are the rules for patentability of plants and animals other than micro-organisms and for patentability of traditional knowledge and folklore. No decision has been reached by governments to commence negotiations.

5.6. *Environmental reviews*

The Doha Ministerial Declaration tasks the WTO Committee on Trade and Development and the Committee on Trade and Environment each to act, within their respective mandates, "as a forum to identify and debate developmental and environmental aspects of the negotiations" (WTO 2001: para. 51). Immediately after Doha, hopes were high in the environment community that this mandate would lead to a careful process of environmental impact assessment of proposed negotiating outcomes. Aaron Cosbey from the International Institute for Sustainable Development proposed several options for how the two WTO committees could carry out such efforts (Cosbey 2002). Unfortunately, neither committee initiated a robust assessment process. Doing so now would not be too late.

Back in 2002, the Johannesburg Plan of Implementation arising out of the World Summit on Sustainable Development called for "urgent action" to "support the successful completion of the work programme contained in the Doha Ministerial Declaration" (United Nations 2002: para. 47). The UN conference was correct to see the importance of successful WTO negotiations for the goal of sustainable development. Unfortunately, owing to various machinations at the WTO, the negotiators missed their 2004 deadline and the talks may continue to drag on for years.

6. Toward a new paradigm for the WTO

In this section I present a new paradigm for conceptualizing the WTO's role with respect to the environment. The existing paradigm is trade linkage, which considers how an organization with a trade purpose should

deal with non-trade objectives, such as the environment. The new paradigm is to see the WTO as an organization with multiple objectives.

6.1. *The multifunctional international organization*

In a decision issued in 1996, the International Court of Justice decided, by a vote of 11 to 3, that it could not respond to a request by the World Health Organization (WHO) for an advisory opinion regarding the Legality of the Use by a State of Nuclear Weapons in Armed Conflict (International Court of Justice 1996).[26] The Court pointed to two reasons: the "general principle of speciality" and the logic of the overall system contemplated by the UN Charter (para. 26). On the same day that it turned down the WHO, the Court issued an advisory opinion on a similar question requested by the UN General Assembly.

With regard to the first reason for turning down the WHO, the Court held:

> International organizations are governed by the "principle of speciality", that is to say, they are invested by the States which create them with powers, the limits of which are a function of the common interests whose promotion those States entrust to them. (para. 25)

The Court further explained that, although the powers conferred on international organizations are normally the subject of an express statement in their constituent instruments, "the necessities of international life may point the need for organizations, in order to achieve their objectives, to possess subsidiary powers which are not expressly provided for in the basic instruments which govern their activities" (para. 25).

How does the international law principle of speciality relate to the environment? In my view, the environmental and market interdependence of life on Earth makes it hard to slice up distinct roles for environmental and economic agencies. Eventually, the bureaucratic preference for compartmentalization has to give way to environmental, economic and political realities.

6.2. *Achieving an environmentally sound WTO*

Consider the case of the WTO. Perhaps the governments drafting the WTO originally intended to create a trade-specific agency. Nevertheless, by the time the negotiations were completed in 1994, the Preamble to the WTO Agreement embraced sustainable development and the environment as a common interest. Then, in 1998, the Appellate Body breathed life into the Preamble language. In 2001, at the Doha Ministerial, the ne-

cessities of international life pointed to a need to launch new negotiations on trade and environment.

Maintaining a trade-only identity for the WTO was difficult because various non-trade issues, such as intellectual property, have already become part of the WTO's mission. Unlike intellectual property, however, where there existed a World Intellectual Property Organization fully competent in the field, for the environment there is no World Environment Organization with competence for major environmental issues (Speth 2004: 177). Thus, if the mandate of an international organization is driven by speciality and a rational division of labour, then the absence of a World Environment Organization provides more justification for a WTO role on environment than was justified for intellectual property.[27]

In calling the WTO an environmental agency, I am not suggesting that the principle of speciality has become obsolete. Even in today's interconnected world, many international agencies will remain highly specialized. What I am saying is that we should move beyond the constructs of the past that see the functional international organization as unitary in purpose. Instead, we should anticipate that major international organizations will often have multifunctional roles that may not always reflect full agreement among state members regarding the common interests that underlie the organization. Internal organizational complexity and divergence are to be expected (Coicaud 2001: 524–525). With member states each having multiple policy objectives, and with differing policy chromatograms for each state, it seems unreasonable to imagine that those same states will funnel down their differences to create single-function international agencies.

Visualizing the WTO as an environmental agency should become the new paradigm for integrating trade and environment. For many years, the operative paradigm has been "linkage" or "trade-and", with the trade regime being asked from the outside to give up some trade progress for the benefit of a different policy realm. Not surprisingly, the trade regime has often resisted the intrusions and congratulated itself for being so virtuous. Never mind that many of the governments inside the WTO have been tripping over themselves to hang on to as much protectionist trade policy as they can. As two WTO scholars recently remarked, "the reality ... is that the WTO is as much about protectionism as it is about free trade" (Guzman and Pauwelyn 2005: 7).

Staying with the old paradigm will frustrate a reconciliation of environment and trade objectives. Some who would resist seeing the WTO as an environmental agency might say that the WTO should maintain its singular trade mission but should improve its cooperation and coordination with environmental agencies. At best, that model seems to suggest that, when the WTO and, say, the Cartagena Biosafety Protocol are going in

the same direction, they should hold hands and walk together. That is fine with me, but what I am really concerned about is what to do if the WTO and the Protocol go in different directions.

The prescription of cooperation – namely that the two organizations should work out their differences – is hard to operationalize when the purposes of the organizations differ. Therefore, we need a new consciousness at the WTO. The new consciousness should be that environment and sustainable development are part of the purpose of the WTO, not just a rhetorical adornment.

To make the WTO a better environmental performer, the mainstream environmental agencies, such as the United Nations Environment Programme, should seek to hold the WTO accountable as an environmental agency. These agencies should evaluate the WTO on its environmental achievements and its shortcomings. Furthermore, these agencies should work to internalize their environmental norms into WTO processes. Environment ministers should reflect on the fact that the trade community is not shy about insinuating its norms into environment treaties. This happened, for example, in the Cartagena Protocol (Oberthür and Gehring, Chapter 5 in this volume) and in the 1997 amendments to the International Plant Protection Convention (Article XVI).

One way that environmental agencies might help the WTO is by seeking to transplant their scientific orientation into the WTO. The WTO needs outside influence to convince it to make sure that all of its trade rules have a scientific basis. Take anti-dumping investigations for example. The WTO actually requires governments to perform such investigations (Anti-Dumping Agreement 1994: Article 5.1), and the WTO Secretariat has been generous in delivering technical assistance to developing countries to get their anti-dumping programmes into action. Yet there is no scientific basis for the notion that countries can boost their national income by imposing tariffs to stop the importation of low-price, "dumped" goods (see Irwin 2002: 124–128). To be sure, an anti-dumping programme can effectuate a redistributional objective within a country, but there are less trade-restrictive ways to accomplish that objective than blocking imports.

7. Conclusion

The WTO Secretariat contends that the WTO "is not an environmental protection agency" and that statement provides a good window into understanding how the WTO interacts with the environment. As this chapter has shown, the WTO is an environmental agency in some of its treaty provisions and in its pro-environment negotiating agenda. This

agenda includes increasing market access for environmental goods and services and curtailing government subsidies that lead to over-fishing.

Why then does the Secretariat deny the WTO's environmental identity? It is because the WTO wants the power to tell governments what measures they cannot use for the environment, but wants to leave to national and international environmental agencies the responsibility for formulating strategies to address environmental problems and, on transborder threats, getting governments to agree. This may sound like a rational division of labour until one realizes that the WTO views its role as being constitutional on the international plane. What I mean by "constitutional" here is that whatever strategies emerge from environmental agencies are reviewable at the WTO.

In view of the disorganization and weak nature of international environmental governance, there is a danger in giving the WTO power over environmental measures without any responsibility for environmental outcomes. Reform can come through inculcating a greater sense of environmental responsibility in the WTO. By calling it an environmental agency we can challenge it to improve.

Today, the WTO operates as an environmental agency and yet is a poorly performing one: it allowed the Doha Round to languish despite the importance of trade liberalization for reducing world poverty; it made all environmental technology subsidies potentially actionable; it neglected to undertake environmental assessments of proposals in the Doha Round negotiations; its emerging case law threatens to reduce domestic environmental regulatory authority. Turning this around will not be easy. In *Spaceship Earth*, 40 years ago, Barbara Ward pondered reaching a time when we "realise the moral unity of our human experience and make it the basis of a patriotism for the world itself" (Ward 1966: 148). Attention to the world's ecological needs ought to be a hallmark of a world trade organization. Looking ahead a decade or two, one can hope that the WTO will not only become a better environmental agency but also be happy to admit it.

Acknowledgements

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Notes

1. Some of the mainstream studies and collections include: Anderson and Blackhurst (1992); Blackhurst et al. (1994); Esty (1994); Fredriksson (1999); Barrett et al. (2000); Könz (2000); Chambers (2001); Esty (2001); Figueres Olsen et al. (2001); Rao (2001);

Sampson and Chambers (2002); Steinberg (2002); Wallach (2002); Wiers (2002); Gaines (2003); Ishibashi (2003); Cosbey (2004a, 2004b); Knox (2004). The Principles elaborated in Blackhurst et al. (1994) were developed by a nine-person expert group that included Konrad von Moltke, as well as others, such as David Runnalls and Janine Ferretti, who were to make important contributions to the trade and environment field. Some recent studies include: Driesen (2005); Sampson and Whalley (2005); Zarrilli (2005).

2. With regard to trade flows, Copeland and Taylor (2003) argue that the scale, technique and compositional changes from trade can help to control pollution.
3. The proposition that the WTO is an environmental agency could be stated another way – namely, that certain WTO rules are part of international environmental law. Several years ago, a compendium of international environmental law, produced for Dutch universities, listed some trade law (see Lammers 1995: 235).
4. Some analysts argue that this extraneous role is a bad idea. See, e.g., Bhagwati (2004: 182–185).
5. But see the WTO Sutherland Commission report, which asserts that "[w]hile trade is an important factor in achieving development aims, the WTO is not a development agency" (Sutherland et al. 2005: para. 269).
6. The same point about trade supremacy can be made with respect to the human rights regime – there too the WTO has sometimes imagined itself as higher law (Pauwelyn 2003; Pruzin 2005).
7. Often this analysis has been directed at national environmental measures that seek to use trade access as a lever to change environmental policy in another country.
8. WTO Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R, adopted 6 November 1998, para. 129 (emphasis in original, internal footnote deleted); see also paras 153, 155.
9. Ibid., para. 185 (emphasis in original).
10. WTO Panel Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products, Recourse to Article 21.5 of the DSU by Malaysia*, WT/DS58/R/W, adopted as modified by the Appellate Body, 21 November 2001, para. 5.54.
11. Calling the WTO a sustainable development agency may be one way to provide an overarching concept for the WTO's work on trade, environment and other functions. In correspondence with me, Aaron Cosbey (who was a close colleague of Konrad von Moltke for many years) makes that suggestion as a way "to take the logic of this paper to its final conclusion".
12. Appellate Body *Shrimp* Report, para. 154.
13. WTO, "The Environment: A Specific Concern", at <http://www.wto.org/english/thewto_e/whatis_e/tif_e/bey2_e.htm> (accessed 12 July 2007).
14. According to the WTO Secretariat, "trade restrictions cannot be imposed on a product purely because of the way it has been produced" (WTO, "The Environment: A Specific Concern").
15. According to the WTO Secretariat, "WTO Members are free to adopt national environmental protection policies provided that they do not discriminate between imported and domestically-produced like products (national treatment principle), or between like products imported from different trading partners (most-favoured-nation clause)" (WTO 2004: 7). This point is untrue because it ignores GATT Article XX, which may permit discrimination meeting the conditions in the Article XX chapeau.
16. Appellate Body Report, *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WT/DS161,169/AB/R, adopted 10 January 2001, paras 163–166 (regarding Article XX(d)). The Appellate Body applied this test to health measures in the *Asbestos* case and has confirmed it twice since then, most recently in its April 2005 decision in the Dominican Republic *Cigarettes* case.

17. WTO Appellate Body Report, *European Communities – Conditions for the Granting of Tariff Preferences to Developing Countries*, WT/DS246/AB/R, adopted 20 April 2004, paras 162–165.
18. See TBT Agreement (1994: Annex 1.2 – explanatory note distinguishing between international standards and other standards covered by the Agreement); WTO Appellate Body Report, *European Communities – Trade Description of Sardines*, WT/DS231/AB/R, adopted 23 October 2002, para. 227.
19. For example, see Boisson de Chazournes and Thomas (2000); Charnovitz (2000); Covelli and Hohots (2003); Rivera-Torres (2003); Stewart and Johanson (2003); Motaal (2005).
20. This is the one discipline in the WTO that explicitly supervises the level of protection to be sought.
21. WTO Appellate Body Report, *European Communities – Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26,48/AB/R, adopted 13 February 1998, para. 124. In a more recent case, the Panel noted that the Biosafety Protocol of 2000 had "confirmed the key function of the precautionary principle" in international law. WTO Panel Report, *Japan – Measures Affecting the Importation of Apples*, WT/DS245/R, adopted as modified by the Appellate Body, 10 December 2003, para. 5.34 & n. 161. This decision has been criticized for its strictness (see Vallely 2004).
22. WTO, "Agreement on Subsidies and Countervailing Measures", ⟨http://www.wto.org/English/tratop_e/envir_e/issu3_e.htm#scm⟩ (accessed 12 July 2007).
23. WTO Appellate Body Report, *United States – Measures Affecting the Cross-Border Supply of Gambling and Betting Services*, WT/DS285/AB/R, adopted 20 April 2005, paras 237, 238. A government could stay out of violation if it lists the national law in its negotiating schedule. This can shelter pre-existing environmental laws but would be useless for new environmental laws.
24. Exclusion is also possible for animals other than micro-organisms. See the complex rule laid out in TRIPS Article 27.3. See also the Convention on Biological Diversity, 5 June 1992, Article 16.5 (regarding intellectual property rights); text available at ⟨http://www.cbd.int/doc/legal/cbd-un-en.pdf⟩ (accessed 12 July 2007).
25. The confidential non-paper, circulated in document Job(07)/54, was entitled "Continued Work under Paragraph 31(iii) of the Doha Ministerial Declaration" (see WTO 2007: paras 159–160).
26. The Court's holding is criticized in the dissenting opinions and in scholarly commentary. For example, see the essays by Pierre Klein, Michael Bothe and Virginia Leary in Boisson de Chazournes and Sands (1999); see also the discussion in Burci and Vignes (2004: 114–118).
27. For a contrary view, see Maskus (2002).

REFERENCES

Abbott, Frederick M. (2005), "The WTO Medicines Decision: World Pharmaceutical Trade and the Protection of Public Health", *American Journal of International Law* 99(2): 317–358.

Agreement on Agriculture (1994), *Agreement on Agriculture. Annex 1A to the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Marrakesh, 15 April 1994; available at ⟨http://www.wto.org/english/docs_e/legal_e/14-ag.pdf⟩ (accessed 12 July 2007).

Alvarez, José E. (2002), "The WTO as Linkage Machine", *American Journal of International Law* 96(1): 146–158.

Anderson, Kym and Richard Blackhurst, eds (1992), *The Greening of World Trade Issues*. Hemel Hempstead: Harvester Wheatsheaf.

Anti-Dumping Agreement (1994), *Agreement on Implementation of Article VI of the General Agreement on Tariffs and Trade 1994. Annex 1A to the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Marrakesh, 15 April 1994; available at ⟨http://www.wto.org/english/docs_e/legal_e/19-adp.pdf⟩ (accessed 12 July 2007).

Barrett, Scott et al. (2000), "Special Issue: Trade and Environment", *Environment and Development Economics* 5(4): 341–530.

Bhagwati, Jagdish (2004), *In Defense of Globalization*. Oxford: Oxford University Press.

Blackhurst, Richard et al. (1994), *Trade and Sustainable Development Principles*. Winnipeg: International Institute for Sustainable Development.

Boardman, Robert (1981), *International Organization and the Conservation of Nature*. Bloomington: Indiana University Press.

Boisson de Chazournes, Laurence and Philippe Sands, eds (1999), *International Law, the International Court of Justice and Nuclear Weapons*. Cambridge: Cambridge University Press.

Boisson de Chazournes, Laurence and Urs P. Thomas (2000), "The Biosafety Protocol: Regulatory Innovation and Emerging Trends", *Swiss Review of International and European Law* 4: 513–557.

Burci, Gian Luca and Claude-Henri Vignes (2004), *World Health Organisation*. The Hague: Kluwer Law International.

Carpentier, Chantal Line, Kevin P. Gallagher and Scott Vaughan (2005), "Environmental Goods and Services in the World Trade Organisation", *Journal of Environment & Development* 14(2): 225–251.

Chambers, W. Bradnee, ed. (2001), *Inter-linkages. The Kyoto Protocol and the International Trade and Investment Regimes*. Tokyo: United Nations University Press.

Chambers, Bradnee (2004), "WTO and Sustainable Development", in Tatsuro Kunugi (ed.), *Taking Leadership in Global Governance*. Osawa: International Christian University, pp. 79–81.

Charnovitz, Steve (2000), "The Supervision of Health and Biosafety Regulation by World Trade Rules", *Tulane Environmental Law Journal* 13(2): 217–302.

Coicaud, Jean-Marc (2001), "International Organisations, the Evolution of International Politics, and Legitimacy", in Jean-Marc Coicaud and Veijo Heiskanen (eds), *The Legitimacy of International Organisations*. Tokyo: United Nations University Press, pp. 519–552.

Copeland, Brian R. and M. Scott Taylor (2003), *Trade and the Environment. Theory and Evidence*. Princeton, NJ: Princeton University Press.

Cosbey, Aaron (2002), "Taking the Doha Language Seriously: The WTO as if Sustainable Development Really Mattered", address prepared for the Royal Institute of International Affairs conference Sustainable Development in the New Trade Round: Trade, Investment and Environment after Doha, Chatham

House, May; available at ⟨http://www.iisd.org/pdf/2002/trade_riia_paper_may2002.pdf⟩ (accessed 12 July 2007).

Cosbey, Aaron (2004a), *Lessons Learned on Trade and Sustainable Development*. Winnipeg: International Institute for Sustainable Development.

Cosbey, Aaron (2004b), *A Capabilities Approach to Trade and Sustainable Development. Using Sen's Conception of Development to Re-Examine the Debates*. Winnipeg: International Institute of Sustainable Development.

Council of the European Union (2001), *Council Regulation (EC) No 2501/2001: Applying a Scheme of Generalised Tariff Preferences*, 10 December, *Official Journal of the European Communities*, L346; available at ⟨http://trade.ec.europa.eu/doclib/docs/2003/may/tradoc_113021.pdf⟩ (accessed 12 July 2007).

Covelli, Nick and Viktor Hohots (2003), "The Health Regulation of Biotech Foods under the WTO Agreements", *Journal of International Economic Law* 6(4): 773–795.

Customs Simplification Convention (1923), *Convention Relating to the Simplification of Custom Formalities*, 3 November 1923, 30 League of Nations Treaty Series 371.

Driesen, David M. (2005), "What Is Free Trade? The Rorschach Test at the Heart of the Trade and Environment Debate", in E. Kwan Choi and James C. Hartigan (eds), *Handbook of International Trade*, vol. 2. Malden, MA: Blackwell Publishing, pp. 5–41.

Esty, Daniel C. (1994), *Greening the GATT*. Washington, DC: Institute for International Economics.

Esty, Daniel C. (2001), "Bridging the Trade–Environment Divide", *Journal of Economic Perspectives* 15(3): 113–130.

Figueres Olsen, José María et al. (2001), "Trade and Environment at the World Trade Organization: The Need for a Constructive Dialogue", in Gary P. Sampson (ed.), *The Role of the World Trade Organization in Global Governance*. Tokyo: United Nations University Press.

Financial Times (2005), "Textiles Stitch-up: Whatever the EU and China Say, Their Deal Mocks Free Trade" (editorial), *Financial Times*, 14 June, p. 18.

Fredriksson, Per G., ed. (1999), *Trade, Global Policy and the Environment*. Washington, DC: World Bank.

Gaines, Sanford E. (2003), "The Problem of Enforcing Environmental Norms in the WTO and What to Do about It", *Hastings International & Comparative Law Review* 26: 321–385.

GATS (1994), *General Agreement on Trade in Services. Annex 1B to the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Marrakesh, 15 April 1994; text available at ⟨http://www.wto.org/english/docs_e/legal_e/26-gats.pdf⟩ (accessed 12 July 2007).

GATT (1947), "Article XX: General Exceptions", *The General Agreement on Tariffs and Trade*; text available at ⟨http://www.wto.org/english/docs_e/legal_e/gatt47_02_e.htm#articleXX⟩ (accessed 12 July 2007).

Greenwire (2004), "China's Mercury Pollution Affects Entire Globe, Scientists Say", 17 December.

Grynberg, Roman and Natallie Rochester (2005), "The Emerging Architecture of a World Trade Organisation Fisheries Subsidies Agreement and the Interests of Developing Coastal States", *Journal of World Trade* 39(3): 503–526.

Guzman, Andrew and Joost Pauwelyn (2005), "An Insider's Guide to the WTO's Problems", *Bridges* 9(1): 7.

Havana Charter (1948), *Charter for an International Trade Organization*; text available at ⟨http://www.wto.org/english/docs_e/legal_e/prewto_legal_e.htm⟩ (accessed 12 July 2007).

Hobbs, Anna L., Jill E. Hobbs and William A. Kerr (2005), "The Biosafety Protocol: Multilateral Agreement on Protecting the Environment or Protectionist Club?", *Journal of World Trade* 39(2): 281–300.

International Court of Justice (1996), "Legality of the Use by a State of Nuclear Weapons in Armed Conflicts: Advisory Opinion of 8 July", available at ⟨http://www.icj-cij.org/docket/files/93/7407.pdf⟩ (accessed 12 July 2007).

Irwin, Douglas A. (2002), *Free Trade Under Fire*. Princeton, NJ: Princeton University Press.

Ishibashi, Kanami (2003), "Environmental Measures Restricting the Waste Trade", in Alexandre Kiss et al. (eds), *Economic Globalization and Compliance with International Environmental Agreements*. The Hague: Kluwer Law International.

Jackson, John H. (2005), "Justice Feliciano and the WTO Environmental Cases: Laying the Foundations of a 'Constitutional Jurisprudence' with Implications for Developing Countries", in Steve Charnovitz, Debra P. Steger and Peter van den Bossche (eds), *Law in the Service of Human Dignity*. Cambridge: Cambridge University Press.

Knox, John H. (2004), "The Judicial Resolution of Conflicts between Trade and the Environment", *Harvard Environmental Law Review* 28: 1–78.

Könz, Peider, ed. (2000), *Trade, Environment and Sustainable Development: Views from Sub-Saharan Africa and Latin America. A Reader*. Tokyo: United Nations University Press.

Krueger, Anne O., ed. (1998), *The WTO as an International Organization*. Chicago: University of Chicago Press.

Lammers, J. G. (1995), *Internationaal Milieurecht*. The Hague: T. M. C. Asser Instituut.

Maskus, Keith E. (2002), "Regulatory Standards in the WTO: Comparing Intellectual Property Rights with Competition Policy, Environmental Protection, and Core Labor Standards", *World Trade Review* 1(2): 135–152.

Motaal, Doaa Abdel (2004), "The 'Multilateral Scientific Consensus' and the World Trade Organisation", *Journal of World Trade* 38(5): 855–876.

Motaal, Doaa Abdel (2005), "Is the World Trade Organisation Anti-Precaution?", *Journal of World Trade* 39(3): 483–501.

Nadal, Alejandro (2005), "Redesigning the Trading System for Sustainable Development", *Bridges* 9(5): 21–22.

Oxley, Alan (2004), "The Relationship between MEAs and WTO Rules", in UNCTAD, *Trade and Environment Review 2003*. Geneva: UNCTAD.

Parliamentary Conference on the WTO (2003), "Final Declaration", Geneva, 18 February; available at ⟨http://www.ipu.org/splz-e/trade03.htm⟩ (accessed 12 July 2007).

Pauwelyn, Joost (2003), "WTO Compassion or Superiority Complex? What to Make of the WTO Waiver for 'Conflict Diamonds'", *Michigan Journal of International Law* 24: 1177–1207.

Pruzin, Daniel (2005), "U.N. Human Rights Official Warns against WTO Restrictions on Food Aid", *BNA Daily Report for Executives*, 20 July.

Qin, Julia Ya (2003), "'WTO-Plus' Obligations and Their Implications for the World Trade Organisation Legal System", *Journal of World Trade* 37(3): 484–522.

Rao, P. K. (2001), *Environmental Trade Disputes at the WTO*. Lawrenceville, NJ: Pinninti Publishers.

Rivera-Torres, Olivette (2003), "The Biosafety Protocol and the WTO", *Boston College International and Comparative Law Review* 26: 263–323.

Sampson, Gary P. (2005), "The World Trade Organization and Global Environmental Governance", in W. Bradnee Chambers and Jessica F. Green (eds), *Reforming International Environmental Governance*. Tokyo: United Nations University Press, pp. 93–149.

Sampson, Gary P. and W. Bradnee Chambers, eds (2002), *Trade, Environment, and the Millennium*, 2nd edn. Tokyo: United Nations University Press.

Sampson, Gary and John Whalley, eds (2005), *The WTO, Trade and the Environment*. Cheltenham, UK: Edward Elgar.

SCM Agreement (1994), *Agreement on Subsidies and Countervailing Measures. Annex 1A to the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Marrakesh, 15 April 1994; available at ⟨http://www.wto.org/english/docs_e/legal_e/24-scm.pdf⟩ (accessed 12 July 2007).

Shaffer, Gregory C. (2001), "The World Trade Organization under Challenge: Democracy and the Law and Politics of the WTO's Treatment of Trade and Environment Matters", *Harvard Environmental Law Review* 25(1): 1–93.

Speth, James Gustave (2004), *Red Sky at Morning*. New Haven, CT: Yale University Press.

SPS Agreement (1994), *Agreement on the Application of Sanitary and Phytosanitary Measures. Annex 1A to the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Marrakesh, 15 April 1994; available at ⟨http://www.wto.org/English/docs_e/legal_e/15-sps.pdf⟩ (accessed 5 July 2007).

Staiger, Robert W. (2004), "Report on the International Trade Regime for the International Task Force on Global Public Goods", February, ⟨http://www.gpgtaskforce.org/bazment.aspx?page_id=175⟩ (accessed 12 July 2007).

Steinberg, Richard H. (2002), *The Greening of World Trade Law*. Lanham, MD: Rowman & Littlefield.

Stewart, Terence P. and David S. Johanson (2003), "A Nexus of Trade and the Environment: The Relationship between the Cartagena Protocol on Biosafety and the SPS Agreement of the World Trade Organization", *Colorado Journal of International Environmental Law and Policy* 14: 1–52.

Sutherland, Peter et al. (2005), *The Future of the WTO. Report by the Consultative Board to the Director-General Supachai Panitchpakdi*. Geneva: WTO.

TBT Agreement (1994), *Agreement on Technical Barriers to Trade. Annex 1A to the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Marrakesh, 15 April 1994; text available at ⟨http://www.wto.org/english/docs_e/legal_e/17-tbt.pdf⟩ (accessed 5 July 2007).

Trade Prohibitions Convention (1927), *Convention for the Abolition of Import and Export Prohibitions and Restrictions*, 8 November 1927, 97 League of Nations Treaty Series 391.

TRIPS Agreement (1994), *Agreement on Trade-Related Aspects of Intellectual Property Rights. Annex 1C to the Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations*, Marrakesh, 15 April 1994; text available at ⟨http://www.wto.org/english/docs_e/legal_e/27-trips.pdf⟩ (accessed 12 July 2007).

UNCED (1992), *Agenda 21*; text available at ⟨http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm⟩ (accessed 12 July 2007).

UNCTAD–ICTSD (2005), *Resource Book on TRIPS and Development*. Cambridge: Cambridge University Press.

United Nations (2002), *Plan of Implementation of the World Summit on Sustainable Development* (Johannesburg Plan of Implementation); available at ⟨http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/WSSD_PlanImpl.pdf⟩ (accessed 12 July 2007).

Vallely, Patrick J. (2004), "Tensions between the Cartagena Protocol and the WTO: The Significance of Recent WTO Developments in an Ongoing Debate", *Chicago Journal of International Law* 5: 369–378.

Von Moltke, Konrad (1993), "A European Perspective on Trade and the Environment", in Durwood Zaelke et al. (eds), *Trade and the Environment*. Washington, DC: Island Press, pp. 93–108.

Von Moltke, Konrad (1996), "The World Trade Organisation and the Environment: What Must Change", PSIO Occasional Paper, Graduate Institute of International Studies, Geneva.

Von Moltke, Konrad (2005), "Clustering International Environmental Agreements as an Alternative to World Environment Organisation", in Frank Biermann and Stephen Bauer (eds), *A World Environment Organisation. Solution or Threat for Effective International Environmental Governance*. Aldershot, UK: Ashgate, pp. 175–204.

Wallach, Lori M. (2002), "Accountable Governance in the Era of Globalization: The WTO, NAFTA, and International Harmonization of Standards", *University of Kansas Law Review* 50(4): 823–865.

Ward, Barbara (1966), *Spaceship Earth*. New York: Columbia University Press.

Waskow, David (2003), "Environmental Services Liberalisation: A Win–Win or Something Else Entirely?", *International Lawyer* 37(3): 777–799.

Wiers, Jochem (2002), *Trade and Environment in the EC and the WTO*. Groningen, The Netherlands: Europa Law Publishing.

WTO [World Trade Organization] (1994a), "Decision on Trade and Environment", adopted by ministers at the meeting of the Uruguay Round Trade

Negotiations Committee, Marrakesh, 14 April; text available at ⟨http://www.wto.org/English/docs_e/legal_e/56-dtenv.pdf⟩ (accessed 12 July 2007).

WTO (1994b), *Agreement Establishing the World Trade Organization*, Marrakesh; text available at ⟨http://www.wto.org/english/docs_e/legal_e/04-wto.pdf⟩ (accessed 12 July 2007).

WTO (2001), *Ministerial Declaration*, Ministerial Conference, Fourth Session, Doha, 9–14 November, WT/MIN(01)DEC/1, 20 November; available at ⟨http://www.wto.org/English/thewto_e/minist_e/min01_e/mindecl_e.pdf⟩ (accessed 12 July 2007).

WTO (2004), *Trade and Environment at the WTO*. Geneva: WTO; text available at ⟨http://www.wto.org/English/tratop_e/envir_e/envir_wto2004_e.pdf⟩ (accessed 12 July 2007).

WTO (2005), *Annual Report*. Geneva: WTO.

WTO (2007), *Summary Report on the Eighteenth Meeting of the Committee on Trade and Environment in Special Session, 3–4 May 2007*, Restricted, TN/TE/R/18, 8 June.

WTO Secretariat (2000), "Environmental Benefits of Removing Trade Restrictions and Distortions: The Fisheries Sector", WT/CTE/W/167, 16 October.

Zarrilli, Simonetta (2005), "International Trade in GMOs and GM Products: National and Multilateral Legal Frameworks", Policy Issues in International Trade and Commodities Study Series No. 29. Geneva: UNCTAD.

Zhang, Ruosi (2004), "Food Security: Food Trade Regime and Food Aid Regime", *Journal of International Economic Law* 7(3): 565–584.

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