
The Environmental Dilemmas of the World Trade Organization

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In the past several years, the world trading system has become embroiled in controversy as a result of a series of environmentally related trade disputes. Pressure has emerged for changes to the institutional and legal structures of the World Trade Organization (WTO) from those concerned that it is overly restrictive in the policies it allows to protect the environment. A common response from a number of WTO members and analysts is that there should be a separation of WTO rules and institutions from environmental issues. But as the subsequent analysis suggests, it is incorrect to presume that such “benign neglect” will insulate the trading system from these issues. One way or another, the WTO will become increasingly involved in them. Indeed, the rules of the original General Agreement on Tariffs and Trade (GATT) (not to mention some of the results of the Uruguay Round), together with the growing importance of environmental policy at national and international levels, virtually guarantee it. Therefore, the question is not whether the WTO should be involved in environmental policy issues but, rather, how it is involved and the extent to which the nature of that involvement should be changed.

First, the analysis considers the use of trade measures to address international environmental problems, their treatment under WTO rules, and various proposed approaches to changing them. Suggested approaches

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are offered that attempt to balance the need for maintaining the integrity of the trading system with the flexibility needed to respond to environmental problems, foster cooperation at the international level, and minimize the extent to which the trading system becomes engaged in the details of assessing environmental problems and policies. Second, the analysis examines how domestic environmental policies are treated under WTO rules. Once again, various proposed changes to the existing trade rules are critically discussed and elements of a preferred approach are offered. Finally, the analysis focuses on the political economy of any future trade-environment negotiation—particularly with respect to developing countries.

This chapter focuses on some proposals that would change the rules of international trade so as to loosen actual or perceived constraints on environmentally related policy instruments. This should not be taken to indicate that the essence of the relationship between the WTO, or trade liberalization generally, and environmental policies is conflictual.¹ Rather, the interest here is in probing the particular aspects of WTO rules that have generated so much controversy over the past few years with the hope of shedding light on genuine issues and plausible ways of addressing them.

Environmentally Motivated Trade Restrictions, WTO Rules, and Proposals for Change

The design of efficient environmental policies can be complicated by the fact that environmental externalities do not respect national boundaries. The challenge is finding mechanisms to ensure that each country equalizes the marginal costs of environmental protection with *global* marginal benefits as opposed to *national* marginal benefits.² Although trade policies may affect cross-border externalities, they are generally not the most efficient instruments for the purpose, because they introduce production and consumption inefficiencies associated with the difference between domestic and international relative prices. Thus, unless trade per se is the

1. There is ample evidence to suggest that liberal trade, fostered by the WTO, is consistent with environmental protection. For a brief survey of the literature on the relationship between trade and the environment, see Uimonen and Whalley (1997, 39-43 and 99-103). For other discussions, see Pearce and Warford (1993), Runge (1994), and Anderson (1992a and b).

2. See Barrett (1991) for a discussion of issues pertaining to the difficulty of developing international solutions to transboundary environmental problems. Generally, international problems with greater divergences between national and international marginal environmental protection benefits pose more serious problems for coordinated international solutions.

source of an environmental externality, it is possible to devise a policy that is more efficient than a trade restriction. Nonetheless, a country affected by cross-border damage may be better off with a second-best trade restriction in the absence of any other policy.³ The threat of sanctions is another policy option that, if credible, would force other countries to adopt policies that internalize cross-border externalities. Sanctions can also reduce the scope of “free rider” problems in negotiating international agreements.

Several types of environmental problems may spur countries to take trade actions. First, domestic damage may derive from the imports themselves. Second, physical cross-border damage may derive from a neighbor’s production or processing methods (PPMs), such as upstream pollution of a river or acid rain. Third, more diffuse externalities (in terms of source and destination) may be associated with the PPMs of a large number of countries. Such problems (e.g., stratospheric ozone depletion and global warming) take on the characteristics of global public goods. Fourth, there are global resource problems that do not take on all the characteristics of public goods (e.g., the problem of conserving the stocks of international fisheries). Finally, there are “psychological” spillovers associated with other countries’ resource or environmental policies.⁴ For example, recent US trade restrictions on tuna and shrimp imports to protect certain species of marine mammals and reptiles fall into the last two categories. Because these restrictions were judged to be inconsistent with WTO rules, questions have been raised about the WTO status of the entire set of trade restrictions imposed on products based on harmful PPMs. Hence, relevant WTO rules and how they have been interpreted in trade disputes in the GATT and the WTO need to be carefully examined.

The Nature of WTO Rules

The fundamental obligations of the GATT (Articles I and III) prohibit discrimination between “like products” from different countries and between

3. One implication of the theory of the second best is that welfare may be enhanced by introducing a distortion when there are cross-border environmental distortions. When a country suffers environmental damage associated with its imports—for example, if its exporting neighbor uses a polluting production process—imposing an import restriction may be welfare-enhancing. However, the importing country must be large enough to affect the terms of trade. See appendix A in Uimonen and Whalley (1997). Lipsey and Lancaster (1956-57) is the seminal contribution on the theory of second best. Bhagwati (1971) analyzes the effects of different policy instruments in dealing with domestic distortions. Subramanian (1992) discusses the extent to which environmental distortions could be remedied through first-best trade policies and concludes that the scope is limited.

4. Pearce and Turner (1990, 130-32) discuss how these are associated with the option value of experiencing environmental resource benefits in the future as well as pure existence value of such resources.

those produced domestically and abroad. These obligations prohibit discrimination between products based on different PPMs. However, recourse can be made to certain general exceptions to these rules that permit measures “necessary” to protect health and safety (Article XX(b)), as well as measures “relating to” the conservation of exhaustible resources (Article XX(g)). Such exceptional measures must not constitute arbitrary discrimination or be disguised trade restrictions (preamble to Article XX).

Members invoking Article XX(b) must show that the trade policy is included in the set of measures for the protection of life or health, is “necessary” for that purpose, and is consistent with the preamble. The “necessity” of a measure has been interpreted as being that which is least inconsistent with other obligations (or least trade-restrictive) from the country’s menu of feasible options.⁵ These criteria discipline the use of trade policies that are not the most efficient instruments available for protection of health or safety. Somewhat less restrictive is the Article XX(g) exception for trade measures “relating to the conservation of exhaustible resources.” Such measures must fall within the set of policies for resource conservation, be “related to” conservation, be “made effective in conjunction with restrictions on domestic production or consumption,” and conform with the preamble of Article XX.⁶

Three WTO dispute resolution panel rulings against US trade restrictions imposed on products based on PPMs that were determined to endanger certain marine mammal and reptile species have generated much controversy. The environmental problems addressed by the restrictions in these cases involve the conservation of natural resource stocks, and psychological spillovers. In each case, the panels determined that the trade restrictions entailed product distinctions based on PPMs and, hence, did not provide nondiscriminatory treatment between “like products.” In each case, the United States sought to invoke the Article XX exceptions to justify these measures. While all the panels concluded that the US measures did not meet the criteria required to justify the measures under Article XX, their reasoning differed. In the dispute brought by Mexico over a US ban on tuna caught by using purse seine nets lethal to certain species of dolphins, the panel ruled that Article XX could not be utilized to protect health and safety or resources outside of the territorial jurisdiction of the country imposing the measures. The panel reasoned that allowing this practice could significantly undermine market access rights and, therefore, such exceptions would need to be negotiated. A second dispute panel, requested by the European Union

5. These criteria have been established through a number of dispute settlement cases. For a discussion see Uimonen and Whalley (1997, 71-90).

6. Again, these criteria have been established through dispute settlement (see Uimonen and Whalley 1997, 71-90).

over the same policy, backtracked from the first panel on this point. Instead, it substituted a criterion whereby a country could not impose such trade restrictions if the only way to achieve its objective was by forcing the affected country to change its domestic policies. The panel maintained that to allow such use of trade instruments would undermine the multilateral trading system.⁷ The most recent WTO case involved a US import ban on shrimp trawled using PPMs harmful to certain species of sea turtles. Adding to the controversy in this case was the fact that it involved species listed as endangered under an international environmental agreement—the Convention on International Trade in Endangered Species (CITES)—as well as under the US Endangered Species Act. However, while the sea turtle species are considered endangered under CITES, there is nothing in that agreement explicitly authorizing the PPM-based trade restrictions imposed by the United States.

Current Uncertainties

These cases have created uncertainty about the breadth of the WTO prohibition on PPM-based measures. For example, would it apply to instances in which there are relatively clear cross-border physical spillovers? Furthermore, to what extent does the prohibition apply to trade provisions of international environmental agreements, particularly measures applied against nonsignatories? One response is to assert the importance of maintaining an institutional division of labor whereby the WTO avoids the task of judging the environmental objectives and policy options of its members. However, this would simply leave these issues unresolved until disputes arise. Moreover, dispute settlement practice on measures taken under Article XX(b) does indeed involve assessments of nontrade policy options, since such measures must be the least trade-restrictive from among those policies considered by panels to be available to a member.⁸ In addition, any future dispute involving, for example, severe cross-border water or air pollution, would be expected to put to a test WTO avoidance of assessing environmental objectives.

The WTO has also strongly endorsed dealing with global commons problems through international cooperation and consensus agreements. Inducing the cooperation of other countries through offers of transfers

7. Interestingly, the panel did not consider whether the US trade measures were of sufficient consequence to have affected the terms of trade and, hence, affect the exploitation of the species in a second-best manner.

8. Hudec (1996) argues that the practice of panels has been to consider the nontrade legitimacy of disputed policies under Article III. In such cases it may be argued that generally when a panel considers an Article XX exception after finding a measure in violation of Article III, it is engaged in an exercise of simply identifying policies that are more efficient, or less trade restrictive, than the one at hand.

and other forms of assistance is the preferred approach. However, uncertainty over the WTO status of potential trade provisions of environmental agreements tends to widen the gap between the bargaining positions of large industrial countries seeking such measures and small developing countries seeking transfers and assistance.⁹ It can therefore be argued that fostering global cooperation in both the environmental and trade areas requires some clarification and accommodation by the WTO to the efforts of negotiators of international environmental agreements, as well as an awareness by environmental negotiators of the importance of designing efficient policy instruments. These uncertainties have stimulated a number of proposed rule changes that will next be considered.

Avenues of Potential Change

International Environmental Agreements

The proper role of the trading system in fostering international environmental protection has been discussed at length, including in the WTO Committee on Trade and Environment (CTE).¹⁰ A number of WTO members have proposed ways to clarify the rules with respect to the treatment of nonsignatories to environmental agreements and increase the degree of coordination between the WTO and environmental negotiators and institutions. A notable feature of the proposals has been the division between developed and developing countries, with the latter favoring relatively tight disciplines on the use of such trade measures.¹¹

A proposal that leaves the existing trade rules essentially unchanged is to accommodate environmental agreements through the waivers mechanism, which may be used for policies that are otherwise inconsistent with WTO rules. The extension of a waiver requires a three-fourths vote of approval of WTO members and is also time limited, with annual reviews required for multiyear extensions to determine whether the exceptional circumstances justifying it still exist. However, use of the waivers mechanism on a case-by-case basis runs the risk of yielding inconsistent outcomes across agreements and, because of their time-limited nature, over time as well. Another concern that was raised in the CTE is that waivers

9. For example, in a final-offer arbitration game, two sides to a negotiation make offers with an arbitrator choosing one of the two offers that comes closest to its preferred outcome. The difference between the offers made by the two sides in negotiation will increase in the uncertainty about the arbitrator's preferred outcome. See Gibbons (1992, 23-26).

10. See WTO (1996, 2-10).

11. For example, India sought an agreement confirming that the current rules could deal with international environmental matters and stating that the nondiscrimination provisions had to be fully reflected in environmental agreements.

could still be challenged on the basis of nullification and impairment of WTO market access rights.¹² Hence, the existing mechanism may not successfully reduce uncertainty.¹³

Other proposals to the CTE have sought more systematic approaches to the treatment of the trade provisions of international agreements. A prominent example is an EU proposal to establish an understanding whereby the trade provisions of an environmental agreement would be presumed to be “necessary,” in the sense of Article XX, provided that the agreement is open to participation by all interested parties. In any WTO dispute involving the trade provisions of such agreements, panels would only consider their consistency with the preamble of Article XX.¹⁴

A proposal similar to that of the European Union is modeled after Article XX(h) of the GATT, which deals with international commodity agreements.¹⁵ Environmental agreements would be submitted to the WTO for review against principles of good design such as those in the Rio Declaration and Agenda 21 of the United Nations Conference on Environment and Development (UNCED). Procedural guidelines would be included as well, such as openness of the negotiating process to interested parties, and open membership procedures on terms no less favorable than those for existing members. Agreements would then be approved, even with respect to their treatment of nonsignatories, unless there is a consensus against it. Alternatively, a more stringent voting scheme could be devised that requires, for example, a three-quarters majority against it. Further, voting could be limited to those WTO members that actually participate in the process of negotiating international environmental agreements, thereby encouraging members to demonstrate a genuine interest in the matter and discouraging more extreme cases of free riding.

These types of proposals have a number of strengths. First, they minimize the extent to which the WTO would become involved in assessing the objectives of international environmental agreements and the nature of the policies necessary for their implementation. Second, they explicitly provide a mechanism of cooperation with international environmental institutions and agreements, similar to those for international commodity

12. See WTO (1996, 4).

13. A proposal made in the CTE by Hong Kong would relax somewhat the time-limited nature of waivers by subjecting multiyear waivers for international environmental agreements to “negative vetting,” which would allow automatic renewal if the initial circumstances do not change.

14. For more discussion, see WTO (1996).

15. See Hudec (1996). Article XX(h) allows for measures inconsistent with other GATT obligations that are “undertaken in pursuance of obligations under any intergovernmental commodity agreement which conforms to criteria submitted to the CONTRACTING PARTIES and not disapproved by them or which is itself so submitted and not so disapproved . . .” (GATT Secretariat 1994, 519).

agreements and regional trading arrangements. Finally, the multilateral character of the agreements, as well as affording a means for the trading system to review their provisions, reduces the danger of a new form of trade protection.

Unilateral Measures

As noted above, there may be instances when physical damages, such as upstream pollution, derive from the PPMs of a neighboring country. The country suffering the damage may claim to be acting within its rights under the WTO in imposing trade penalties in response. In such a case, it is uncertain how a WTO panel would rule. In order to reduce this uncertainty, proposals clarifying a member's rights in such circumstances have been considered.¹⁶ The problem with making an allowance for such measures is how to do so while minimizing inefficiency and ensuring adequately predictable market access rights.

Making any allowance for such policies would require conditions on its use. This, in turn, would require, at some level, a consideration of the nature of the environmental objective being pursued and the relative effectiveness of the policy instrument. A proportionality test, whereby the environmental benefits of the measure are weighed against the trade costs, is one way to do this. The test would be more likely to allow a trade-related defensive reaction the more localized the cross-border environmental damage. As environmental problems take on more of the character of international public goods problems, unilateral measures would be increasingly likely to result in disproportionate trade costs and run afoul of the test. This type of allowance would also generally allow greater use of such measures by large industrial countries that can affect the terms of trade.

A proportionality test can also vary in its stringency. At the stringent end, trade measures would be presumed to violate the rules unless it could be clearly shown that the benefits substantially exceed the trade costs. At the other end of the spectrum, such actions would be permitted unless the trade costs were "clearly disproportionate" to the environmental gains.¹⁷ Given the asymmetry of treatment between large, primarily industrial, countries and small, developing, ones, garnering support for a less stringent proposal would likely require greater negotiated trade concessions in other areas for the latter.

16. Current rules may make allowances in cases of physical cross-border problems. However, as indicated previously, this is uncertain because of a lack of GATT/WTO jurisprudence. If so, then the proposals being discussed involve clarifying existing rules rather than making substantive changes.

17. A prominent example of this type of proposal may be found in Esty (1994).

Finally, there are the environmental problems that have actually generated trade policy actions and WTO adjudication. The US tuna restrictions were pursued with the objective of protecting global stocks of certain marine mammals and remedying the effects of certain negative “psychological spillovers.” In the case of the unilateral US ban on shrimp, the objective was to protect an endangered species, although it was not explicitly authorized under the relevant international agreement. Such unilateral trade measures aim to protect resources outside a country’s jurisdiction, and hope to induce policy changes in other countries. With physical cross-border damage, an appeal to the polluter-pays principle and an assignment of property rights to a clean domestic environment may be resorted to for justification of a trade policy response. However, this is more difficult to sustain when cross-border damage is less evident or when the environmental resource is located abroad. Any attempt to change the trade rules to allow for these types of unilateral measures would essentially involve granting large industrial countries the right to impose trade sanctions on small developing nations to induce policy changes. It is difficult to imagine, or expect, that small developing-country members of the WTO would agree to allow such discretionary suspensions of their market access rights.¹⁸ Therefore, such an exception to the trade rules would need to be subject to conditions (e.g., limited to those cases where the environmental deterioration is of immediate concern).¹⁹ This would require that the WTO arbitrate the degree and immediacy of environmental damage, which is unlikely to diffuse controversy, given the WTO’s lack of comparative advantage in assessing environmental problems.²⁰ It is also doubtful that unilateral trade restrictions, in an attempt to protect a resource within another country’s territorial jurisdiction, would be effective.²¹

Finally, allowing conditional trade actions to support international agreements that do not explicitly authorize them (as in the shrimp case) would place the WTO in an extremely awkward position. It is difficult

18. This reticence is reflected not only in the proceedings of the WTO’s CTE on these matters but also in the UNCED agreements, including Principle 12 of the Rio Declaration (see WTO 1996; Uimonen and Whalley 1997, 57-61).

19. See Farber and Hudec (1996) for examples.

20. With international agreements, the nature of an environmental problem may be left to be determined through the negotiation and administration of the agreement. With unilateral measures, the WTO must go beyond what is currently permitted and determine the circumstances in which sanctions are to be allowed. The alternative is to allow the individual countries imposing the unilateral measures to make such determinations themselves, which is untenable for small countries.

21. Barbier and Rauscher (1995), for example, establish conditions under which import restrictions on tropical timber would increase deforestation. The analysis also establishes the second-best nature of such policies.

to expect the WTO, rather than the institutional apparatus of an environmental agreement, to determine what explicit measures should be authorized. Appropriate legal and institutional distinctions are necessary to allocate responsibilities in the areas of international trade and environmental rules.

For example, in the shrimp case, the current rules imply that the United States may resolve the dispute by lifting the bans. However, this is not necessary. Instead, it is possible for the United States to maintain the restrictions while continuing to negotiate bilaterally, multilaterally, or in CITES with its trading partners to satisfactorily resolve the species conservation problem. However, in that case the United States would be required to negotiate compensating trade barrier reductions with those countries whose access rights have been infringed.²² Furthermore, a country seeking to take such action may use existing waivers mechanisms, as described above. These rules are appropriate when the environmental problem deals with values or resources located abroad and where there are no identifiable cross-border damages.

An alternative to negotiating a set of general criteria for unilateral trade actions would be to negotiate a list of relatively specific environmental externalities that would be acted on a unilateral basis. This alternative would obviate the need for the WTO to involve itself in distinctions between local and diffuse externalities, the appropriate form of a proportionality test, or the environmental objectives that would pass muster under the rules. Instead, a list of environmental problems could be established and periodically renegotiated whereby the WTO would not adjudicate a dispute in the event of unilateral trade actions. This would be an admittedly crude way of addressing the problems raised by unilateralism. However, it might break the gridlock that has emerged by focusing attention on specific environmental problems instead of the implications of more general rule changes. It would also serve to reduce uncertainty regarding the status of the current rules and would allow the WTO to avoid becoming excessively involved in the details of environmental objectives and policies.

Trade-Related Domestic Environmental Regulations and Standards

There has long been a concern in the design of trade agreements that regulations, standards, or taxes ostensibly for domestic regulatory or fiscal purposes may be disguised restrictions on trade. This concern derives

22. Negotiating compensating trade barrier reductions depends on the political strengths of various constituencies in the country taking the trade action (including the strengths of the environmental lobby supporting the action, the import-competing groups that will

from the fungibility of the methods of trade protection available to countries. This fungibility is related to the difficulties of designing trade agreements that maintain a cooperative low trade barrier solution to a Prisoner's Dilemma game. Maintaining cooperation requires that behavior be monitored, since there is always a temptation to cheat on commitments, presumably deriving from the weight of special industrial interests in the trade policymaking process. The incentive to cheat, coupled with the relative ease of monitoring traditional instruments of protection, can give rise to the use of ostensibly domestic policies for protection, which are more difficult to monitor (see Dixit and Nalebuff 1991, 97).

The basic problem is how to strike a balance between ensuring trading partner market access rights and allowing flexibility in the choice of domestic policies for correcting domestic market failures. Addressing this problem has been a fundamental task of the trading system, as reflected in the national treatment obligation and in certain Uruguay Round agreements. Given the growing importance of environmental protection policies, scrutiny of trade-related environmental measures (TREM) is inevitable.

National Treatment

The national treatment obligation of the GATT (Article III) requires members to treat imports in the same manner as "like products" of domestic origin with respect to internal taxes and regulations (see GATT 1994, 490-91). Specifically, Article III:1 states that measures (taxes or regulations) should not be applied "so as to afford" protection to domestic industry. Article III:4 applies to national regulations and requires that imported products be "accorded treatment no less favorable than that accorded to like products of national origin." Article III:2 requires that internal taxes on imports not be in excess of what is applied to like domestic goods. As noted earlier, it has also been dispute settlement practice to consider product distinctions based on PPMs as running afoul of this obligation. In addition, as pointed out in Roessler (1996), there are two interpretive problems here. The first involves the definition of "like products." According to dispute settlement practice, whether like products are treated in accordance with Article III depends on whether there are legitimate nontrade objectives associated with different tax or regulatory treatment or whether such differences simply "afford domestic protection." The second interpretive problem involves determining what constitutes "treatment no less favorable" for imports in comparison to domestic goods. Dispute settlement practice has interpreted this to mean that foreign

be affected by the offsetting market access reductions, and the import-competing groups that benefit from the WTO-inconsistent measure) as well as the constituencies of the affected countries.

producers should be granted the same competitive opportunities as domestic producers.

The requirement that imports be afforded treatment “no less favorable” than domestic products does not explicitly distinguish between ostensibly discriminatory measures and other, ostensibly neutral, measures that have differential effects on products from different countries.²³ In practice, however, measures that distinguish between domestic products and imports for no identifiable or legitimate regulatory purpose generally violate the national treatment obligation. The treatment of ostensibly neutral measures with greater or less regulatory justification varies from case to case.

These rules were recently applied in 1994, when the European Union challenged certain US taxes and petroleum conservation measures applied to automobiles. In that case, the panel did not consider that protectionist intent in the legislative history of some of the measures was sufficient to prove a violation of Article III.²⁴ The panel also determined that exclusions from fuel-efficiency measures for small trucks and sports utility vehicles, while reducing the efficiency of those measures, were not sufficient to establish a violation of Article III. Furthermore, the panel did not rule against the United States, despite the highly disproportionate effect of the fuel efficiency measures on European automobile manufacturers. Finally, in a bit of curious reasoning, the panel ruled that the measures did not “inherently” discriminate between foreign and domestic goods since foreign producers had the technological capability to meet the requirements.²⁵ This case has raised concern that the WTO, in the future, may err on the side of excessively lax scrutiny of domestic measures.²⁶ Henceforth, many similar disputes will probably be considered in the context of the Uruguay Round agreement on Technical Barriers to Trade instead of, or in addition to, Article III.

An Early Assessment of Uruguay Round Agreements on Standards and Regulations

The Tokyo and Uruguay Rounds of trade negotiations included efforts to further expand the rules governing trade-related domestic standards

23. See Farber and Hudec (1996) for more details.

24. The luxury car tax and the Corporate Average Fuel Efficiency standard contained evidence of this.

25. A basic flaw with this reasoning is that similar production technologies do not preclude the introduction of trade distortions through the use of discriminatory regulatory and tax measures. Indeed, standard analyses of the costs of trade protection most often assume identical production technologies across countries.

26. This panel ruling was critically analyzed in Farber and Hudec (1996), Mattoo and Subramanian (1994), and Vogel (1998).

and regulations. In 1979, the GATT Contracting Parties negotiated the Tokyo Round Agreement on Technical Barriers to Trade. This was followed by the agreements on Sanitary and Phytosanitary Standards (SPS) and Technical Barriers to Trade (TBT) in the Uruguay Round, which expanded the scope of rules in these areas. Their essential provisions are given in table 1.²⁷ The common objective of these agreements is to minimize the extent to which standards and regulations have negative trade effects or act as disguised barriers to trade, while permitting members to adopt and maintain standards that are necessary for the protection of human, animal, and plant life and health. The SPS agreement applies to health and safety standards on food and agricultural goods. Measures subject to the provisions of the TBT agreement are regulations (mandatory) and standards (voluntary), including those for environmental protection, as well as those that apply to product-related PPMs (e.g., waste regulations and regulations on product ingredients).

Each agreement contains both a national treatment obligation and a necessity test to minimize the adverse trade effects of domestic measures—that is, they are to be no more restrictive than necessary to achieve a legitimate objective. The SPS agreement further requires that standards have some scientific justification. What this requirement entails has already been the subject of dispute settlement procedures under the agreement, as will be discussed below.

Each agreement contains harmonization provisions encouraging the use of international norms as bases for national standards (table 1). The agreements impose a number of conditions for using higher standards and regulations. As mentioned above, the SPS agreement allows for stricter standards if there is scientific justification. But what constitutes sufficient scientific justification is an open question and has led to concern among consumer safety and environmental advocates over the potential for international standards-setting bodies to be unduly influenced by producer, as opposed to consumer, groups. Higher SPS standards are also to be based on risk assessments which take account of all (including economic) factors. Measures meeting international norms are rebuttably presumed consistent with the agreement.

Because of the recent vintage of the Uruguay Round agreements there has been little experience with the interpretation of their provisions through dispute settlement. The US challenge of an EU ban on hormone-treated beef was the exception. The United States argued that the ban was an unfair trade barrier and lacked scientific justification. The European Union defended the policy as a measure to protect public health, as perceived by its citizens.²⁸

27. See Uimonen and Whalley (1997, 90-95) for further discussion of these agreements.

28. See Jackson (1991) for a discussion of various aspects of this case and the EU ban.

Table 1 Provisions of the Uruguay Round standards agreements

	Sanitary and phytosanitary standards (SPS)	Technical barriers to trade (TBT)
Objective	Discipline SPS measures so they do not entail arbitrary or unjustifiable discrimination and are not disguised trade restrictions, while allowing measures for protection of human, animal and plant life and health (Preamble).	Discipline technical regulations (including PPMs) so they do not entail arbitrary or unjustifiable discrimination and are not disguised trade restrictions, while allowing measures to protect human, animal and plant life/health, or the environment, or for prevention of deceptive practices (Preamble).
Basic obligations	<p>Nondiscrimination. Measures must not arbitrarily discriminate or be used as disguised trade barriers (Article 2.3).</p> <p>Necessity. Measures are to be applied only to the extent necessary to achieve the SPS objective, based on scientific principles and not maintained without sufficient scientific evidence (Article 2.2).</p>	<p>Nondiscrimination. Regulations are not to discriminate against imports or imports from different sources (Article 2.1).</p> <p>Necessity. Regulations are not to be used “with a view or with the effect of creating unnecessary obstacles to trade” or be “more trade restrictive than necessary to fulfill a legitimate objective, taking account of the risks nonfulfillment would create” (Article 2.2).</p>
Harmonization	<p>Harmonization. Measures are to be based on international standards where they exist (Article 3.1). Standards meeting international norms are presumed consistent with the agreement (Article 3.2).</p> <p>Exceptions. Stricter standards are permitted if there is scientific justification (article 3.3). Higher standards to be based on an appropriate risk assessment, taking account of a variety of factors (including economic) (Article 5.1-5.4). They shall avoid arbitrary or unjustifiable distinctions in risk levels in different circumstances when they result in trade discrimination (Article 5.5). Higher standards are not to be more trade restrictive than necessary given economic and technical feasibility (Article 5.6). With insufficient scientific information, measures may be adopted provisionally using pertinent available information (Article 5.7).</p>	<p>Harmonization. Regulations are to be based on international standards where they exist (Article 2.4). Regulations for legitimate objectives and meeting international norms are presumed to be consistent with agreement (Article 2.5).</p> <p>Exceptions. Stricter regulations allowed for “legitimate objectives” (Article 2.4). Regulations should be based on performance rather than design characteristics if possible (Article 2.8).</p> <p>Equivalence. Importing countries are to consider accepting regulations of exporters if they are satisfied that they fulfill the same objectives (Article 2.7).</p> <p>Local governments. Members are to take reasonable measures to ensure local government and nongovernmental compliance (Article 3).</p>

Table 1 Provisions of the Uruguay Round standards agreements
(continued)

	Sanitary and phytosanitary standards (SPS)	Technical barriers to trade (TBT)
Administration and dispute settlement	Committee on SPS Measures will administer the agreement and monitor progress on harmonization. It will also develop guidelines in areas with major trade effects, taking "into account all relevant factors, including the exceptional characters of human health risks to which people voluntarily expose themselves." Decisions are to be made by consensus. Dispute panels may establish technical expert groups or consult relevant international organizations on their own initiative or that of either party to a dispute (Articles 11 and 12).	Committee on TBT will administer the agreement. Dispute panels may establish and consult technical expert groups on their own initiative or that of either party to the dispute (Articles 13 and 14).
Transparency	SPS standards are to be published promptly and, unless circumstances are exceptional, time is to be allowed for trading partners to comment and/or adapt their production methods prior to entry into force. Where international standards do not exist, members are to make relevant standards known to trading partners (via publishing a notice, notifying WTO, etc.) and allow reasonable time for comment from interested members (unless the domestic problem is urgent) (Annex B).	Where international standards do not exist, members are to make relevant technical regulations known to trading partners (via publishing a notice, notifying WTO, etc.) and allow reasonable time for comment from interested members (unless the domestic problem is urgent) (Articles 2.9-2.10).
Definitions	SPS measure. Policies to protect domestic human, animal, or plant life or health from risks of pests; decisions borne by foreign products; policies to protect domestic life and health from additives or toxins; policies to protect other damage within a member's territory from spread of pests/diseases (Annex A).	Technical regulation. Document specifying characteristics of products or related PPMS (including packaging and labeling requirements) and where compliance is mandatory. Standard. Document from recognized body providing rule or guidelines for characteristics of products or related PPMS (including packaging and labeling requirements) and where compliance is voluntary.

Source: GATT Secretariat (1994).

Although both the original dispute resolution panel and the appellate body ruled against the European Union, the hormone case is interesting because of the significant differences between their interpretations of the SPS provisions.²⁹ First, the appellate body ruled that the SPS agreement did not mandate a rebuttable equality of protection from sanitary and phytosanitary risks, thereby overturning the original panel's interpretation that relatively strong harmonization was required. Second, the appellate body ruled that determining appropriate levels of sanitary and phytosanitary protection should be made at the national level. Third, unlike the original panel, the appellate body ruled that a risk assessment may include analysis other than that of a strictly quantitative nature in a controlled laboratory setting. Fourth, the appellate body overruled the panel on whether SPS provisions require the presence of a "scientifically identifiable risk." Relatedly, while the original panel ruled that the "potential" of a risk is to be identified with a "probability," this too was overruled by the appellate body. Fifth, the appellate body noted that justifiable regulations are often undertaken when there is no scientific consensus on the nature of the risks being regulated. It was determined that there is nothing in the agreement that limits adopting standards stricter than international norms in cases where scientific opinion is divided over the presence or level of risk. Consistent with these rulings, the appellate body provided more scope for policymakers to establish standards based on the "precautionary principle" than the original panel did. Finally, the appellate body was much more circumspect in permitting differences in allowed risks across products or in different situations to be used as evidence of arbitrary trade restrictions. Thus, the hormone case demonstrates substantial divergence on the interpretation of the provisions of the SPS agreement, although the appellate ruling may be more indicative of the future direction of the WTO.

The WTO's Dilemma and Proposals for Reform

As the disputes over the EU beef hormone ban and US fuel efficiency policies indicate, the WTO has grappled with some controversial issues. On the one hand, the WTO has avoided involvement in national standard and regulation setting, except perhaps for the loose harmonization language of the TBT and SPS agreements. On the other hand, as seen in these same agreements, the WTO has become increasingly involved in specifying rules and procedures required for standards/regulations to be consistent with maintenance of market access rights. Roessler (1996) has characterized WTO rules on standards and regulations by distinguishing between "positive" and "negative" standards. The WTO generally applies

29. See WTO (1997, 1998).

negative standards, which is to say that members are not required to adopt standards or regulations, but if they are adopted, certain rules are to be followed in order to minimize trade disruption and the possibility of disguised protection.³⁰

Not surprisingly, to the extent that the trade rules are characterized by such “negative standards,” they have generated both debate and proposals for reform that would ensure an expanded menu of options with respect to TREMs. One argument for such proposals is that there are often numerous constraints on the feasible domestic policy set that may preclude first-best instruments. One proposal would be to explicitly distinguish between ostensibly discriminatory and ostensibly neutral measures.³¹ In cases involving the latter, the complaining member would have the burden of proof to demonstrate protectionist abuse. Furthermore, instead of a “necessity test,” there would only need to be a non-negligible nontrade benefit from the regulation (rather than that it be the least trade-restricting from the menu of available options as perceived by a dispute panel). Thus, ostensibly neutral policies would be subjected to a “balancing test” that compares the trade costs of a measure to its nontrade benefits. Accordingly, a domestic measure would be inconsistent with the rules only if its primary purpose is not for environmental protection and only if the trade disruption is “clearly disproportionate” to the environmental benefit.³² One reason for proposing this type of proportionality test derives from the difficulties of precisely measuring environmental benefits (which are often related to the difficulty of determining shadow prices of environmental resources). These difficulties have often made the costs of environmental policies (in terms of market-valued output) easier to analyze than the benefits. Thus, until sufficient progress is made in estimating such benefits and allowing for more finely tuned cost-benefit analyses, one could argue in favor of granting a benefit of the doubt to domestic policymakers.

These types of changes could be undertaken through negotiation of an understanding clarifying Article III and Article XX provisions as well as certain provisions of the SPS and TBT agreements. For example, table 1 illustrates how these proposals would require modifications to the SPS and TBT agreements. Proportionality language would have to be

30. The exception is TRIPs, which applies “positive” intellectual property protection standards.

31. This is taken up in Esty (1994) and discussed in Farber and Hudec (1996).

32. This proposal can be found in Esty (1994) and is only part of a more far-reaching proposal covering a wide array of possible trade-related environmental protection measures. Essentially, TREMs would be examined in three different ways. They would be reviewed for both the intent and effect of protection, environmental legitimacy, and unjustified trade disruption (i.e., whether the trade cost is clearly disproportionate to the environmental benefit).

substituted for the “necessity” tests in these agreements (Article 2.2 of each agreement), and similar substitutions pertaining to exceptions to the loose harmonization requirements would need to be made.

There are a number of things to note about these types of proposals. First, they attempt to account for the various policy constraints (actual and perceived) faced by national governments in adopting first-best policy measures. The aim is to permit governments greater leeway in adopting second-best environmental policies for solving domestic problems.

Second, recent dispute settlement panel decisions (such as those in the CAFE and hormone cases) may not be too far off the mark in terms of what these proposals are attempting to accomplish. Each of the rulings has, if anything, erred on the side of flexibility in the choice of domestic policies. For example, in the hormone case, the appellate body interpretation of the rules governing SPS measures goes a long way toward diffusing concerns that the SPS agreement might set excessive limits on WTO members’ choice of appropriate risk levels.³³

Third, these proposals reflect a dilemma for environmental policy advocates as well as the WTO.³⁴ Contrary to a widely perceived notion that the current system of trade rules aims to destroy domestic environmental protection laws, well-designed trade rules instead can discipline elements of domestic policies that are inefficient in attaining a given environmental objective. Generally, a domestic policy that is ostensibly discriminatory or includes numerous exemptions favoring domestic producers (e.g., the US gas guzzler tax) is not only discriminatory vis-à-vis trading partners, it is also inefficient. A negative WTO ruling on such measures can stimulate domestic policy changes that are beneficial from the standpoint of the environmental objective rather than resulting in the elimination of such measures.

Additional criteria might also be considered in any reexamination of the trade rules on TREMs. First, TREMs ought to deal with the given environmental objective consistently across goods. Thus, trade and domestic production restrictions ought to be imposed reasonably consistently across products with similar negative environmental attributes (rather than arbitrarily on some products). Such a requirement could discipline more obviously protectionist and inefficient measures such as the US gas guzzler tax exemption on light trucks and sports utility vehicles. Second, TREMs should not include superfluous trade restrictive elements—i.e., elements that restrict trade but serve no useful environmental objective. A further refinement of the proportionality tests proposed above

33. Some may even consider that the appellate body’s decisions provided a rather lax interpretation of the rules that threatens to make the agreement little more than a set of transparency and procedural requirements.

34. Roessler (1996) makes the following point. Also see Uimonen and Whalley (1997, 87).

would be to subject domestic measures that are ostensibly neutral, but which clearly have discriminatory intent, as evidenced by legislative history, for example, to a more stringent test. Thus, in such cases the defending country would have to prove that the nontrade benefits were “clearly disproportionate” to the trade costs. Alternatively, such cases could trigger more stringent “necessity” tests.

A Trade-Environment Negotiation: Can It Be Done?

Many of the proposals to change WTO rules discussed above can be expected to yield developing country opposition. In international bargaining over the appropriate mechanisms to use in gaining cooperation for protecting environmental resources, the desired mix between transfers and technical assistance on the one hand, and trade-policy enforcement mechanisms on the other, differs between large developed countries and small developing countries. Thus far, developed countries have more often espoused the use of trade policies than developing countries. In this type of bargaining situation, the WTO may be seen as playing the role of arbitrator, where the greater the probability that the WTO rules against large countries imposing trade measures, the better the bargaining position of small developing countries. Therefore, large industrial countries would have to offer more compensatory measures in negotiations to induce small developing-country cooperation. Also, the greater the uncertainty about the rules followed by the arbitrator, the greater the difference in negotiating positions. Hence, greater uncertainty about the rules can yield more conflict and tension in international negotiations.

Are there any developed-country trade offers that would induce developing countries to cooperate? Some recent research on the potential for North-South bargaining in a linked trade-environment negotiation is suggestive (Abrego, Perroni, Whalley, and Wigle 1997). Essentially, to the extent that a coalition of developing countries with environmental assets of sufficient value to developed countries can be formed, it could gain substantially by exchanging stronger environmental protection policies for greater developed country trade liberalization commitments.³⁵

35. In Abrego, Perroni, Whalley, and Wigle (1997), there are two regions. An environmental asset (forests) is wholly owned by the South and more strongly valued in the North. Depletion of the resource occurs more rapidly through production of the tradable good. The strategic variables are tariffs and environmental charges. The study simulates trade-only negotiations and trade-environment negotiations (with no transfers in the latter). It also simulates a bargaining solution with transfers. While a trade-only negotiation benefits the South substantially, a linked trade-environment negotiation yields substantially greater gains to both the North and South. The study also concludes that the first-best outcome is complete trade liberalization and environmental negotiations that make use of transfers.

However, there is reason to be doubtful about a developing country rush to ante up. First and foremost (as seen earlier in this chapter), any plausible trade-environment negotiation would not involve developing country environmental charges but rather in rules changes on the applicability of trade measures for environmental purposes. It is arguable that there would remain, regardless of efforts at clarification, significant residual uncertainty about the implications of the rule changes that developing countries would be asked to accede to.

Conclusions

The bargaining problems noted above suggest that, to produce a successful trade-environment negotiation, a relatively modest agenda may be necessary. Such an agenda might include:

- a WTO mechanism for reviewing and approving international environmental agreements—together with a waiver for existing agreements—where future agreements would be reviewed for transparency and openness, and approved unless a consensus or qualified majority of members vote against it;
- a negotiated list of agreed cross-border environmental damages over which unilateral trade-related responses would not bring a WTO dispute; and
- some clarification of the SPS and TBT agreements that could include differing treatment of ostensibly discriminatory measures and neutral measures with a preponderance of evidence of protection (i.e., a necessity test or evidence showing that the nontrade benefit was disproportionate to the trade costs) and all other ostensibly neutral measures (which might be subject to a less stringent proportionality test).

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