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Like Products, Health & Environmental Exceptions: The Interpretation of PPMs in Recent WTO Trade Dispute Cases*

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This article is concerned with the ongoing debate on process and production methods (PPMs) and the extent to which existing GATT 1994 articles and WTO agreements are able to deal with these issues. The article provides an overview of GATT articles III.4 on like products and XX on general exceptions as well as the SPS and TBT agreements. It then summarises four recent GATT/WTO trade dispute cases involving PPM issues: tuna–dolphin; shrimp–turtle; gasoline standards; and asbestos. The WTO panel and appellate body decisions in these cases are analysed with regard to articles III.4 and XX in the context of the evolution of WTO case law with respect to PPMs. Inferences are also drawn concerning the likely implications for a potential trade dispute over GM products between the EU and the United States. The article then draws some policy conclusions.

Keywords: asbestos, environment, exceptions, gasoline, GM, health, like products, PPMs, shrimp–turtle, trade disputes, tuna–dolphin, WTO

Many industrialised countries are increasingly interested in regulating international trade in goods and services on the basis of the inputs and process technologies utilised in their production – process and production methods (PPMs). PPMs have become a major topic for debate in international trade primarily as a result of the growing concern of consumers in industrialised countries over health and environmental issues. The emergence of consumers as key *demandeurs* of protection is in marked contrast to the leading role played by governments and domestic producers in orthodox trade theory. These concerns with PPMs derive from qualitative, i.e., political and ethical, as well as quantitative factors relating to, among others, health and safety, pollution, environmental conservation and the use of child labour. There have been several recent high profile trade disputes concerning PPMs that raise critical issues of intrinsic merit relating to WTO legitimacy. The outcomes of these cases have led several member countries and NGOs to question the validity of WTO procedures and rules (Laird, 2001; Holmes et al., 2003). Among some NGOs and lay critics, there is a view that the WTO is anti-environmental in that trade concerns have taken precedence over the environment; however, many PPM regulatory issues considered and interpreted by WTO dispute panels and the appellate body are not as simple they might appear.

This article provides an overview of the extent to which the WTO has already incorporated PPM issues under the GATT 1994 and other agreements with respect to several recent cases affecting health/safety and/or the environment. After a brief overview of the political economy of issues related to PPMs in section 1, section 2 discusses the key GATT articles and the role of the Sanitary & Phytosanitary (SPS) and Technical Barriers to Trade (TBT) agreements. Sections 3 to 6 outline recent GATT/WTO trade disputes involving PPM issues. This discussion is followed by consideration of the panel interpretations of the relevant GATT articles and WTO agreements in the context of PPM issues. The potential outcome of a dispute over GM products is also considered. The final section summarises key points and attempts to derive policy implications.

1. The Political Economy of Process & Production Method Issues in International Trade

The broadest interpretation of PPMs embraces several contentious international trade issues of contemporary concern relating to: the health and safety aspects of new technologies; depletion of resources, both renewable and non-renewable; environmental pollution; and restrictions on the use of child and forced (slave or prison) labour. All of these issues relate to the potential generation of negative externalities in the form of unforeseen or ignored by-product impacts.

The increased impetus for the consideration of PPMs within the WTO rules comes primarily from consumers and is based upon politics and ethics – i.e., qualitative grounds. This is a departure from the traditional roles of domestic producers as the principal proponents of protection and consumers as the greatest beneficiaries of liberalisation. The desire to regulate trade based upon PPMs is arguably a direct consequence of the success of multilateral trade liberalisation, notably in the leading industrialised countries. Liberalisation has led to an increasing focus on more sophisticated qualitative issues relating to consumer choice regarding alternative modes of production as opposed to quantitative issues related to product supply and prices.

The WTO Committee on Trade & the Environment (CTE) deals explicitly with issues related to trade and the environment. Its remit covers such issues across the whole range of WTO agreements. There is a growing debate about whether these issues should be dealt with explicitly by the WTO through the application of the articles of the GATT 1994, or separately, under distinct agreements (see, for example, Bhagwati, 2000; 2002; Deere and Esty, 2002).

Governments and producers, particularly those in the industrialised countries, are not necessarily opposed to ethical and political grounds for qualitative regulation on the basis of PPMs. Rather, the issue is the extent to which PPM issues could be dealt with effectively under existing WTO agreements, specifically GATT articles III.4 (Like Products) and XX (General Exceptions) and the SPS and TBT agreements, and other multilateral agreements such as the International Labour Organization (ILO). There is considerable concern that any attempt to extend the WTO rules to include PPMs would give rise to excessive regulatory complexity and therefore greater scope for dispute. Nevertheless, the failure to deal with consumer concerns about PPMs is likely to widen the perceived "democratic deficit" of the WTO and further undermine its credibility as the multilateral arbiter of international trade matters.

Many arguments related to PPMs rely upon qualitative criteria such that their very nature means they lack scientific justification. The dichotomy between quantitative and qualitative criteria is critical to the PPM debate. The goods-based methodology of trade regulation is amenable to cross-border scrutiny, whereas regulation based on qualitatively defined PPMs in many cases is not and may incur disproportionate costs associated with documentation, monitoring and traceability. Regulation related to PPMs is therefore more exposed to potential fraud, particularly if discerning consumers are willing to pay a price premium for certain goods and services.

While there is by no means a consensus among the leading industrialised countries, there is clear evidence of a "North-South" split on how to address issues

related to PPMs. Many developing countries are deeply suspicious of proposals for the explicit inclusion of PPMs in the WTO, fearing that the imposition of harmonised environmental, technological and other qualitative standards with high thresholds set by the industrialised countries would threaten their already precarious market access. Such standards could also be used by the industrialised countries as "disguised" protection to restrict increasing competition from developing countries' exports as trade liberalisation progresses. The treatment of PPMs within the WTO therefore remains problematical and, unlike under the GATT, there is no leeway for the implementation of a voluntary code, such as those agreed as part of the Tokyo Round. A specific WTO agreement on PPMs therefore remains a distant prospect unless the industrialised countries can gain the necessary support for regulatory change from the developing countries.

2. Trade in PPMs & the Current WTO Regulations

Most PPM trade issues are subject to two principal articles of the GATT 1994: Article III on National Treatment and Article XX on General Exceptions.

GATT Article III, Non-Discrimination and "Like Products"

The principle of non-discrimination is one of the key foundation stones of the WTO system and requires that equal treatment be afforded to domestic and imported goods and services. This equality of treatment (or no less favourable treatment) is enshrined in the *chapeau* and paragraphs of Article III of GATT 1994. The critical wording, qualified in Paragraph 2, is the term "like product", defined as "a directly competitive or substitutable product" (GATT Article III:2, WTO, 1999).

The criteria for determining what constitute like products have developed as a result of the evolution of GATT/WTO case law (see, for example, Commission of the European Communities, 2000; Choi, 2003). Further, the appellate body report on asbestos contains a 70-paragraph analysis of what is meant by like products in the context of Article III and accrued case law (WTO, 2001b). Four general criteria were first established by a GATT working party in 1970 (GATT, 1970):

- The properties, nature and quality of the products, i.e., the extent to which they have *similar* physical characteristics.
- The end-use of the products, i.e., the extent to which they are *substitutes* in their function.
- The tariff classification of the products, i.e., whether they are treated as *similar* for customs purposes.

- The tastes and habits of consumers, i.e., the extent to which consumers use the products as *substitutes* – determined by the magnitude of their cross-elasticity of demand.

The critical issue related to PPMs is that qualitative criteria for trade regulation are generally inconsistent with the product-based customs methodology enshrined in Article III. In many cases, the physical characteristics of the products concerned are identical or very similar, such that they cannot be distinguished easily or, possibly, at all, by means of scientific analysis. The goods-based approach assumes implicitly that apparently like products are therefore close substitutes, but this is certainly not the case for some consumers with respect to PPMs. By definition, by-product negative externalities are necessarily separate and distinct from the products themselves, such that only the fourth criterion, consumer tastes and habits, applies, and then only for well-informed and discerning consumers.

A further issue, and one that has encountered difficulties at the WTO, relates to the use of national environmental and/or social legislation to deal with PPMs. Such restrictions may be applicable to domestic producers but are not sustainable with respect to imports from third countries because they are WTO-incompatible under Article III. This imbalance can be viewed as effective reverse discrimination against domestic producers and a disincentive to raising domestic standards unless equivalence can be applied to imports (Fisher, 2001). The application of such equivalence to imports however, appears to be dependent upon the sanctioned use of Article XX, General Exceptions.

GATT Article XX, General Exceptions

Article XX is the general exception clause to the GATT 1994 and provides ten specific grounds for permitting exceptions to the trade rules. The use of any of these exceptional measures is subject to the WTO consistency provisions of the *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. (GATT Article XX, WTO, 1999)

The two paragraphs of Article XX of particular relevance to the discussion of PPMs are (b), on health, and (g), on conservation. In each case the meaning appears clear. Paragraph (b) requires that any such exceptional measures are "necessary to protect human, animal or plant life or health." Paragraph (g) states that exceptional measures are permitted "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption." The interpretation of these two paragraphs by dispute panels,

however, has evolved so as to further refine the circumstances under which their use is sanctioned, both within their meaning and also with respect to the GATT principles. That is, to be permissible, exceptional measures must, in themselves, be WTO-consistent with GATT articles I (Most-Favoured Nation) and III (Non-Discrimination).

The SPS & TBT Agreements

There is some debate concerning the extent to which PPMs are already covered under existing WTO rules, notably the SPS and TBT agreements. Restrictive trade measures under a GATT Article XX(b) exception on health grounds can be implemented "only to the extent necessary" (Article 2:2 of the SPS Agreement) and "not more restrictive than required to achieve the appropriate level of protection" (Article 5:6). Further, any such measures are required to be supported by a consensus of scientific evidence accepted by a recognised international agency, such as the Codex Alimentarius Commission in the case of food safety (Article 3:4). In the absence of sufficient scientific evidence however, countries are permitted to apply temporary measures and "seek to obtain the additional information necessary … and review the … measures accordingly within a reasonable period of time" (Article 5:7). All such measures must be applied in a manner consistent with WTO principles and not constitute a disguised restriction on trade (Article 2:3).

The TBT Agreement also allows for the application of similarly agreed international technical standards to justify Article XX(b) exceptions for health and safety reasons. A key element of the TBT is "regulatory proportionality": that any such import requirements – for example, packaging and labelling – should not be more trade-restrictive "than is necessary … taking into account the risks non-conformity would create" (Article 5:1:2 of the TBT Agreement). Again, any such measures must be applied in a manner consistent with WTO principles (Article 2:1).

3. The GATT (Dolphin-safe) Tuna Cases

The GATT tuna–dolphin case is seen as emblematic of the trade regulation–environment debate. This is because it was the first case to test the legitimacy of import restrictions imposed, in this case by the United States, on environmentally damaging PPMs. The tuna–dolphin issue arises because dolphin pods and yellowfin tuna shoals are symbiotic in the eastern Pacific. As a result, the use of particular fishing techniques in the region, such as small and medium gauge driftnets, means that tuna and dolphins are effectively joint products, giving rise to significant negative environmental externalities through high dolphin mortality rates.

The 1972 U.S. Marine Mammal Protection Act (MMPA) was among the first legislation to set limits on acceptable (non-zero) dolphin mortality rates, particularly with respect to endangered species. The act also required U.S.-registered tuna vessels to carry official observers. Under the Direct Embargo ("comparability") Provision of 1984, the United States prohibited yellowfin tuna imports from those countries lacking similar conservation programmes. In addition, the Intermediary Nation Provision required third-country exporters (generally tuna canners) to demonstrate that they prohibited tuna landings by countries banned under the Comparability Provision (see Joshi, no date). In 1990, the Dolphin Protection Consumer Information Act (DPCIA) was passed, which stated that dolphin-safe labels may only be applied to tuna harvested in a manner that is "not harmful" to dolphins. The imposition of the embargoes by the United States under the 1984 provisions was delayed for commercial and political reasons until the successful outcome of a legal challenge by a coalition of environmental groups in 1990.

The First GATT Tuna Case

On 5 November 1990, Mexico complained to the GATT that its tuna exports to the United States had been prohibited because it refused to comply with the MMPA. The extra-territorial application of the MMPA was the primary basis for the Mexican complaint, in that such application was seen as a GATT-incompatible barrier to trade. A GATT panel was established in February 1991 and its findings published in August (GATT, 1991).

The GATT panel first investigated whether the MMPA constituted an internal regulation under Article III or a quantitative restriction under Article XI. It found that the MMPA did not directly regulate the sale of tuna under Ad Article III and further, under Article III.4, that its regulations on dolphins could not possibly affect tuna as a product. The MMPA regulations were then found to constitute a quantitative restriction under Article XI.1 such that they were GATT-incompatible. The panel then turned to the U.S. argument that the MMPA could be justified by Article XX, General Exceptions, paragraphs (b) and (g). With respect to XX(b), health, the issue was whether the MMPA provisions could be applied extra-territorially. The panel found that the U.S. measures did not meet the requirement of necessity, that the United States had not exhausted all reasonable options to ensure consistency with the GATT and that the basis for the permitted dolphin mortality rates was unpredictable. With regard to Article XX(g), conservation of resources, the panel rejected the extra-territorial application of nationally determined U.S. conservation policies. Even if these policies were acceptable, the U.S.-established dolphin mortality rate would not be a GATT-consistent measure because of its unpredictability (GATT, 1991).

The panel also considered the labelling of "dolphin-safe" tuna in accord with the U.S. DPCIA under Article I, Most-Favoured Nation. The panel decided that any advantage derived from consumer choice and was not determined by the origin of the product, such that it was consistent with Article I.1.

In its concluding remarks, the GATT panel noted that its findings did not provide an opinion on the appropriateness of the dolphin conservation policies of Mexico and the United States. Rather, there was little scope to consider national environmental policies under Article XX paragraphs (b) and (g), given the absence of specific criteria. This, the panel believed, could only be resolved via a waiver from or amendment to the GATT text.

The 1991 GATT panel report on tuna was never adopted, in spite of strong support from the EU and many other intermediary countries, because Mexico and the United States agreed on a bilateral solution outside the GATT (WTO, no date, a). The panel decision in the first tuna case therefore did not become part of GATT case law.

The Second GATT Tuna Case

The second tuna case resulted from a complaint by the EU and the Netherlands on behalf of the Netherlands Antilles in spring 1992. As intermediary processors, the EU and the Netherlands Antilles were affected by the MMPA restrictions on U.S. tuna imports and the failure to adopt the first GATT panel report. Although the first case had been resolved bilaterally between Mexico and the United States, the MMPA itself was not amended; therefore, the original inconsistencies identified in the first (unadopted) panel report remained with respect to third countries. A GATT panel was established in August 1992 but its proceedings were suspended that autumn after the MMPA was amended. The United States also passed the International Dolphin Conservation Act as part of the Conservation of Dolphins Agreement, known as the La Jolla Agreement. This agreement set multilaterally agreed limits on dolphin mortality rates, observation and monitoring requirements and penalty provisions.

The panel report for the second GATT tuna case, published in June 1994, broadly upheld the report of the first panel, albeit with some differences with respect to the interpretation of Article XX (GATT, 1994). The panel found in favour of the United States with respect to the extra-territorial application of its conservation policies under Article XX(g), but it found, in addition, that the measures used were not GATT-consistent. It also found that U.S. conservation policies were covered under Article XX(b) but that the measures used were not necessary. The second tuna panel therefore also found against the United States but, again, the panel report was not adopted because there was insufficient time for the United States to study the findings prior to the GATT being superseded by the WTO on 1 January 1995 (WTO, no date, a).

President Clinton subsequently amended the MMPA to comply with the second GATT panel ruling and thereby avoided a complaint under the new WTO Understanding on Rules and Procedures Governing the Settlement of Disputes (DSU).

The GATT Tuna–Dolphin Cases and PPM Issues

The principal issues raised by the tuna–dolphin cases with regard to PPMs are the interpretations of GATT articles III, Like Products, and XX, General Exceptions, by the two dispute panels with respect to the U.S. dolphin-safe measures. These issues are discussed in the literature on the two tuna cases (see Hurlock, 1992; Porter, 1992; Yechout, 1996).

The panels' discussions of Article III focus upon whether the U.S. measures to protect dolphins could be applied to tuna, whether domestic or imported. The first panel concluded that, for the purposes of the case, dolphins and tuna could not be viewed as like products. Neither panel however, was required to adjudicate as to whether dolphin-safe and non-dolphin-safe tuna were like products and therefore whether national restrictions on non-dolphin-safe tuna were GATT-consistent. The PPM issue of negative externalities arising from the joint production of yellowfin tuna and dolphins was never tested by either dispute panel because of the indirect nature of the U.S. protective measures.

The difference in interpretation by the two panels of paragraphs (b) and (g) of GATT Article XX is important. The second tuna panel found that the U.S. dolphin conservation policy was GATT-consistent and could be applied extra-territorially. As in the first panel decision however, the actual measures were deemed neither "necessary" nor GATT-consistent.

4. WTO Shrimp–Turtle Case

The WTO shrimp–turtle case covers a very similar range of trade and environmental – and therefore PPM – issues to the two tuna–dolphin cases outlined above. The key importance of the shrimp–turtle case is that it was launched after the introduction of the WTO DSU; this means that the decisions in the shrimp–turtle case have become enshrined in WTO case law.

The 1973 U.S. Endangered Species Act requires U.S.-registered shrimp trawlers and other shrimp vessels in U.S. waters to use turtle-excluder devices (TEDs) "when fishing where there is a likelihood of encountering sea turtles"' (United States, 1973). TEDs are now regarded as the international standard for protecting sea turtles because of their low cost, effectiveness and ease of use (CIEL, 1999). The act was amended in November 1989 to permit the placing of embargoes on shrimp imports from those countries without a comparable regulatory programme to protect sea turtles. U.S.

shrimp imports also require certification that they were harvested using TEDs and that their incidental mortality rate is similar to that in place for the United States, unless their fishing environment does not pose a threat to sea turtles. The relative threats of various shrimp fishing methods to endangered sea turtle species were prioritised in 1995 by the Marine Turtle Specialist Group of the International Union for Conservation of Nature & Natural Resources (IUCN).

In May 1996, the United States applied the embargo under the Endangered Species Act on all non-turtle-safe shrimp imports. India, Malaysia, Pakistan and Thailand subsequently lodged a WTO complaint against the U.S. embargo in October 1996, on the grounds that such import bans cannot be applied extra-territorially (WTO, 1996a). A WTO panel was then established, the U.S. defence resting upon GATT Article XX exceptions alone rather than incorporating Article III as in the tuna case.

The report of the WTO shrimp panel, published in April 1998, found that the U.S. measures were discriminatory in that they took no account of methods other than TEDs to protect sea turtles (WTO, 1998a). Further, prior certification and the extension of technical and financial assistance were negotiated only with selected countries, mainly in the Caribbean. The prohibition of imports of shrimp from non-certified WTO member countries therefore constituted a quantitative restriction under Article XI. The U.S. argument that the ban on non-certified shrimp imports fell within the remit of Article XX(g) was rejected by the panel on the grounds that sea turtles are not an exhaustible resource and that such "unilateral measures could jeopardise the multilateral trading system." The Article XX(g) finding conflicted with that of the second GATT tuna panel (GATT, 1994), but the latter had no basis in WTO case law because neither tuna decision was adopted.

The United States appealed against the shrimp panel decision on the grounds that sea turtles are endangered and should be regarded as exhaustible under Article XX(g) and the import restrictions were therefore justified (WTO, 1998b). The WTO appellate body report, published in October 1998, reversed the original Article XX(g) decision, finding that endangered sea turtles are an "exhaustible resource" and therefore environmental and conservation objectives are a legitimate trade measure (WTO, 1998c). The appellate body found, however, that the U.S. protective measures were "arbitrarily" discriminatory; thus they were inconsistent with the *chapeau* to Article XX and therefore illegal under Article XI.

The United States amended its Endangered Species Act in response to the findings of the appellate body, and, in March 1999, published its revised guidelines for shrimp imports. In October 2000, the United States was then subject to a DSU Article 21.5

complaint from Malaysia concerning both the compliance of the revised guidelines with the appellate body's ruling and the U.S. failure to negotiate a WTO-compatible multilateral agreement on sea turtle conservation (WTO, 2000a). The panel report, published in June 2001, found that the U.S. revised guidelines violated Article XI but were justified under Article XX(g) (WTO, 2001c); however, the panel refused to rule on U.S. intentions with respect to securing a multilateral sea turtle agreement.

Although the WTO shrimp–turtle case was lost by the United States, the grounds on which it was lost were that the U.S. measures were discriminatory, not that the United States sought to protect the environment (WTO, no date, b). The shrimp–turtle case is a landmark decision in WTO case law (Jackson, 2000) because the Appellate Body recognised the validity of the U.S. Endangered Species Act. U.S. Trade Representative Robert Zoellick stated that the decision "shows that the WTO as an institution recognizes the legitimate environmental concerns of its Members" (Zoellick, 2001). The U.S. State Department has since intensified its efforts to negotiate a multilateral agreement on sea turtle protection in the Indian Ocean and Southeast Asia.

The issues involved in the WTO shrimp–turtle case are broadly similar to those of the GATT tuna–dolphin case. Both sets of cases arose because of significant negative environmental externalities resulting from the joint production of shrimps/sea turtles and tuna/dolphins respectively. Although the United States did not make use of Article III.4 in defence of its shrimp–turtle measures, the Appellate Body confirmed the interpretation of Article XX(g) as including conservation, an interpretation first developed in the second GATT tuna case. This interpretation was based upon the broader application of the meaning of "exhaustible resources" in Article XX(g) to include all living beings, especially endangered species, in the light of the objective of sustainable development as laid down in the preamble to the WTO agreements (1998c). Several trade and environmental issues relating to the shrimp–turtle case are discussed by McLaughlin (1997) and Shaffer (1998).

5. The WTO Gasoline Standards Case

In a 1990 amendment to the U.S. Clean Air Act, the U.S. Environmental Protection Agency (EPA) developed new and stricter rules on the composition and emission effects of gasoline, the "gasoline rule" – effective 1 January 1995. The rule was intended to reduce toxic motor vehicle pollution. It established minimum levels of cleanliness for "reformulated gasoline", to be sold in the most polluted parts of the country, and "conventional gasoline", sold elsewhere. The rule applied to all U.S. refiners and blenders as well as to gasoline imports. The permissible emissions for

"conventional gasoline" for domestic refineries were based upon a baseline quality derived from a minimum of six months operation during 1990. Where no 1990 baseline could be established, the EPA assigned a "statutory" baseline reflecting the average quality of domestic gasoline. This same baseline was applied to imports of gasoline. The EPA's statutory baseline was stricter than the baseline of most U.S. refineries (WTO, no date, c). Further, compliance with the regulation was assessed on an annual average basis for U.S. refineries but was assessed per shipment for foreign ones.

In January 1995, Venezuela, later joined by Brazil, lodged a WTO complaint regarding the new and discriminatory U.S. gasoline composition and emission regulations in one of the first cases to be considered under the new WTO DSU. Venezuela complained that the U.S. rule violated GATT articles I and III as well as the TBT Agreement, because the new EPA baseline standards discriminated between domestic and foreign refiners (WTO, 1995). Because Venezuela's crude oil has a high sulphur content, the regulation made it much harder for that country's exports of gasoline to meet the EPA's statutory baseline.

The WTO panel decision, published in January 1996, found against the United States because its gasoline rule was inconsistent with Article III.4, on like products, in that it treated foreign refineries more severely than domestic ones (WTO, 1996b). Because the gasoline rule distinguished between reformulated and conventional gasoline as well, it also allowed variations in permitted baselines between domestic refiners. The panel therefore found that the gasoline rule did not enforce consistent national air quality levels and thus could not be justified under Article XX(b), (d) and (g).

The United States appealed against the panel decision on the grounds that the gasoline rule was covered by Article XX(g) (WTO, 1996c). Although the appellate body upheld the general conclusions of the dispute panel, it ruled that the baseline composition and emission rules should be considered under Article XX(g) but that they did not meet the requirements of the *chapeau* (WTO, 1996d). The United States changed its emission regulations in August 1997 to comply with the ruling. In return for the EPA permitting foreign refineries to make use of all available methods to calculate their baseline compliance with the gasoline rule, the Brazilian and Venezuelan governments agreed to subject them to U.S. inspection and enforcement (WTO, no date, c).

The objective of the U.S. gasoline rule was to limit toxic vehicle emissions; the negative externality was the adverse health effects arising from gasoline *consumption*. The WTO case provoked considerable controversy in the United States because the

gasoline panel decision forced it to accept Venezuelan gasoline imports with higher concentrations of toxic pollutants. The gasoline standards case however, was not about pollution per se but rather regulatory discrimination against foreign refiners. Under the panel's interpretation of Article XX(g), any WTO member country may determine its own acceptable emission standards but must ensure that they are WTO-consistent, i.e., non-discriminatory, to satisfy the *chapeau*.

6. The WTO Asbestos Case

In December 1996, France imposed a general ban, for reasons related to health, on the production, processing, importation and sale of all forms of asbestos and asbestos products. Specific exceptions were made where safer substitutes did not yet exist. Similar EU-wide legislation on asbestos and asbestos products was passed in June 1999, effective 1 January 2005 at the latest. As a result, Canada (a major asbestos exporter) complained in May 1998 that the French ban was illegal. The Canadian case had two elements: that the blanket ban on carcinogenic chrysotile (white) asbestos was not based upon the International Organization for Standardization (ISO) standard; and that the ban discriminated in favour of less dangerous substitutes. Canada brought a case under articles 2, 3 and 5 of the SPS Agreement, Article 2 of the TBT Agreement and the GATT Articles III, XI and XXIII (WTO, 1998d). A dispute panel was established the following November.

In the asbestos panel findings, published in September 2000, France was found to have discriminated against Canadian asbestos under GATT Article III.4, because chrysotile asbestos and less carcinogenic substitutes were deemed to be like products (WTO, 2000b). As a result, the asbestos ban was therefore a quantitative measure inconsistent with GATT Article XI; however, the panel ruled that the French ban was justified under Article XX(b) as being "necessary" to protect human health, on the grounds that the carcinogenic properties of all forms of asbestos have been proven scientifically. The panel also found that the ISO's level of acceptable risk was higher than that being sought by France but that it had no status as a multilateral agreement. The ISO is an industry-dominated body that agrees upon international specifications and performance norms, which are generally minimum threshold international standards. These specifications are therefore not guidelines for governments in setting acceptable national levels of public health risk. Canada's arguments under the SPS and TBT agreements concerning internationally agreed standards were therefore not sustainable with respect to Article XX(b).

Canada appealed against the panel decision because the blanket ban on asbestos had been found to be WTO-consistent on health grounds in spite of the ISO standard

(WTO, 2000c). The EU also appealed, its case being against the Article III.4 decision that less dangerous asbestos substitutes were like products (WTO, 2000d). In its submission to the appellate body, the EU provided a detailed opinion on the interpretation of like products (CEC, 2000). The EU argued that the panel recognised that white asbestos and its substitutes are like products only with respect to a small number of very specific end-uses but possess dissimilar physical characteristics, properties and tariff classifications (WTO, 2000b). The EU submission concluded that the panel established an erroneous hierarchy of criteria contrary to Article III.2 and, in making their decision solely on the basis of end-use, disregarded more important criteria (CEC, 2000).

The report of the WTO Appellate Body, published in March 2001, found that the asbestos panel had concluded that chrysotile and other asbestos were like products after examining only the end-use criterion to the exclusion of the other three (WTO, 2001b). Further, the panel did not consider the health implications of asbestos. The Appellate Body found that "… evidence related to the health risks associated with a product may be pertinent in an examination of 'likeness' under Article III.4 …". This meant that the consumer tastes and habits criterion was pertinent given the health risks associated with chrysotile asbestos. The original like-product ruling was therefore reversed by the Appellate Body. The Appellate Body upheld the panel ruling of the applicability of Article XX(b) on the grounds that the import ban was "necessary" on public health grounds. This decision meant that the Canadian WTO challenge under the SPS and TBT Agreements and GATT Article XI could not be sustained. The Appellate Body ruling was praised by EU Trade Commissioner Pascal Lamy as showing that "[l]egitimate health issues can be put above pure trade concerns" (Commission of the European Communities, 2001).

The asbestos dispute ruling is another landmark case with respect to establishing WTO case law on national health standards and also on like products. In over-riding the SPS and TBT agreements, the Article XX(b) asbestos decision recognised the primacy of national governments in setting appropriate domestic health and safety regulations. If the Article XX(b) argument had not been sustained by the Appellate Body, WTO member countries would find it very difficult to ban trade in any dangerous goods.

7. WTO Panel Interpretations of PPM Issues

The debate on PPMs at the WTO remains ongoing although several dispute panels have considered key PPM issues in their deliberations and decisions. The findings of these WTO panels, along with those of the Appellate Body, represent

incremental progress in the interpretation and establishment of legal grounds for trade restrictions based upon PPM arguments. This section considers the critical interface between trade and PPM issues with respect to the key articles of GATT 1994 discussed in section 3 in the context of the dispute cases discussed above.

WTO Panel Interpretations of GATT Article XX, Paragraph (b), Health

Of the cases discussed in this article, the only ruling on the applicability of GATT Article XX(b) as a justifiable exception is that on the WTO asbestos dispute between Canada and the EU/France. The Article XX findings in the asbestos case confirm that national public health measures are legally justified under Paragraph (b), where supported by appropriate scientific evidence. Both the original panel and the Appellate Body found that the carcinogenic nature of chrysotile (white) asbestos fibres has been widely acknowledged by international bodies, including the World Health Organisation, since 1977 (WTO, 2001b). This consensus regarding the body of scientific evidence established *prima facie* support for the restrictive trade measures as "necessary" on the grounds of the risk to public health. The only remaining requirement was to decide on whether the measures were WTO-compatible under the *chapeau* of Article XX. Because the ban imposed on the imports of asbestos was a blanket one, the restrictive trade measures were non-discriminatory and therefore conformed to the requirements of the *chapeau*.

The gasoline standards case addressed the issue of the WTO-compatibility of national pollution control legislation, primarily on the grounds of protecting domestic health. In its defence, the United States cited Paragraph (b) of Article XX as well as paragraphs (d) and (g). The WTO appellate body made its ruling on the basis of Paragraph (g) alone since, for the purposes of a decision, only a single finding of exception under Article XX is necessary. It is possible to surmise that the Article XX exception would also have been sustained had the Appellate Body chosen instead to consider the gasoline rule under Paragraph (b). The gasoline rule was found to be discriminatory because it was unpredictable for foreign refineries. As in the case of the Paragraph (g) exception, the Paragraph (b) defence would also have failed to comply with the *chapeau* to Article XX.

In the light of this discussion, it is worth considering the current simmering dispute between the EU and the United States with respect to genetically modified (GM) goods because of its relevance to the discussion of PPMs. This has not, as yet, become a full-blown WTO trade dispute case but it may well become one (see Perdikis, 2005). There are strong similarities with the case of consumer health concerns in Europe related to beef produced with hormones. It is likely that, in the

event of a trade dispute over GM goods, the EU would adopt a defence under Article XX(b) on the basis of the Precautionary Principle, similar to the defence used in the beef hormone case. This principle is risk averse in that it advocates trade restrictions, primarily on food products, until there is compelling scientific evidence to demonstrate that the products have no harmful effects on consumers; however, the SPS Agreement permits WTO members to impose only "temporary" trade restrictions on health grounds in the absence of scientific evidence and/or consensus (Article 5.7). If supportive scientific evidence is not forthcoming, then any trade restrictions must be brought into conformity. The WTO beef hormones panel did not accept the Precautionary Principle as a legitimate defence under Paragraph (b), and a new panel would be unlikely to do so in the case of GM goods.

WTO Panel Interpretations of GATT Article XX, Paragraph (g), Conservation

The shrimp–turtle panel finding with respect to GATT Article XX(g) on the legal justification for national conservation measures has been cited as a major step forward for the WTO with respect to environmental issues (Jackson, 2000). The WTO panel confirmed two critical legal points under Paragraph (g): that living creatures can be exhaustible resources; and that national conservation measures may be applied extra-territorially. This latter finding reiterated the unadopted second GATT tuna–dolphin decision. The potential scope for exceptions permissible under Article XX(g) in the light of the shrimp–turtle case is discussed by Jackson (2000).

The principal reason both the GATT and WTO panels sustained the Paragraph (g) defence on extra-territorial conservation was that the United States was party to appropriate multilateral environmental agreements (MEAs) on dolphins and turtles. The development of appropriate MEAs to cover such trade and conservation issues is part of the remit of the WTO Committee on Trade & the Environment. Although the GATT tuna decisions were never adopted, a tuna–dolphin case launched under the WTO DSU would be unlikely to succeed because of the subsequent involvement of the United States in MEAs for dolphins – the Declaration of Panama and the International Dolphin Conservation Program. These MEAs would be likely to satisfy the consistency and necessity requirements of the *chapeau* to Article XX.

The analysis and findings of the WTO gasoline dispute panel are broadly similar to those of the tuna–dolphin and shrimp–turtle cases in that the panel confirmed the use of Article XX(g). The case confirms the principle that WTO members are free to pursue their own domestic environmental policies and implement national regulations under Paragraph (g) so long as these regulations are WTO-consistent under the conditions of the *chapeau*.

The applicability of Article XX(g) also has some relevance to the discussion of the potential dispute between the EU and the United States concerning GM goods. This is because of fears of environmental contamination of non-GM organisms, both within and between plant and animal species. Given the present lack of scientific evidence on the potential long-term effects of genetic modification, the application of the Precautionary Principle would appear to be highly appropriate in this case. The critical issue is how a WTO panel would interpret the lack of both positive and negative scientific evidence on genetic modification. The likelihood is that a panel would reject the use of a Paragraph (g) defence until sufficient scientific evidence on the long-term adverse effects of GM products was available. This was the case with asbestos under Paragraph (b) until relatively recently.

WTO Panel Interpretations of GATT Article III.4, Like Products

The WTO asbestos case successfully tackles scientifically proven negative health externalities arising from the processing or consumption of goods rather than from their production. The Article III.4 aspect of the asbestos case relates to the extent to which similar goods with different health effects can be viewed as like products. The WTO asbestos Appellate Body report contains a 70-paragraph analysis of what is meant by "like products" in the context of Article III.4 and accrued GATT/WTO case law. The report follows the precedent, first established under the GATT in 1970, of considering the four like-product criteria in turn and rejecting the establishment of a particular hierarchy. The analysis also recognises that like-product issues need to be considered on a case-by-case basis.

The like-product decision in the asbestos case has important, and potentially far-reaching, implications for PPMs relating to health and safety. This is because it establishes the need for panels to consider *all* of the relevant criteria rather than focus unduly on just a subset. The view that the asbestos decision demonstrates that products entailing health risks can be accorded differential treatment to safer substitutes (Constantini, 2001) however, is not strictly accurate. Dangerous products can be banned under Article XX(b) on health grounds if the danger is verified by scientific evidence. The Article III.4 like-product finding in the asbestos case applies only to essentially *different* products that are potential substitutes only in certain circumstances. Products deemed to be like products would generally be expected to have *similar* health effects such that trade restrictions would stand or fall under Article XX(b).

This aspect of the like-product discussion has important ramifications both for beef produced with hormones and for GM goods. While these products differ

scientifically from non-hormone beef and non-GM goods respectively, they are close substitutes in terms of their physical characteristics, properties, end-uses and tariff classifications. In its application of the like-product methodology however, the appellate body in the asbestos case considered the impact upon consumer tastes and preferences in the light of the accumulated scientific evidence on the differential health risks (WTO, 2001b). The Appellate Body's analysis rejected any hierarchy of like-product criteria but decided that a negative finding under one criterion was sufficient to justify a failure to satisfy Article III.4. The banning of toxic chrysotile (white) asbestos was therefore sanctionable under Article XX(b) on health grounds while trade in less harmful asbestos substitutes was permitted.

The critical issue for both GM products and beef produced using hormones is the extent to which the EU's Precautionary Principle has scientific merit with respect to their treatment as like products. This would depend upon the willingness of a WTO panel to accept the risk-averse approach of the EU and/or a lower standard of scientific evidence with respect to the like-product criterion of consumer tastes and habits than is required under the SPS Agreement. A negative finding under Article III.4 in either case however, might still be referred back to Article XX Paragraph (b), and possibly (g), under which the SPS Agreement is again effective. In this case, the defence would probably fail. Nevertheless, a negative Article III.4 finding would sanction the use of differential tariff treatment between the two types of beef and between GM and non-GM products.

It is also interesting to consider the joint product aspects of the interpretation of like products under Article III.4. In both the tuna–dolphin and shrimp–turtle cases, the panels found that these joint products could not be considered alike for the purposes of the legal analysis. In neither of these cases however, was the defence based upon joint production. All tuna-catch technologies have by-catch effects on endangered species (see Clover, 2004), even if dolphin mortality rates are now close to zero. Given that such by-catch effects are quantifiable rather than qualitative, joint production issues based upon scientific evidence could be addressed under Article III.4 rather than as exceptions under Article XX. This issue is not as important in the shrimp–turtle case because the effectiveness of TEDs means that they are no longer joint products.

8. Conclusions & Policy Implications

This article analyses several important issues relating to PPMs in the context of recent trade disputes brought before GATT and WTO panels. The primary focus of the discussion is the use of GATT articles III.4, Like Products, and XX, General

Exceptions, and Paragraphs (b), on health, and (g), on conservation, by the plaintiffs and their interpretation by dispute panels and WTO Appellate Body. It is clear from the cases cited that WTO dispute settlement is becoming increasingly sophisticated in its dealings related to PPM issues, although progress in terms of case law is generally incremental.

Although both GATT tuna–dolphin decisions remained unadopted, the panel decisions laid the foundations for the later shrimp–turtle case in establishing the conditions for the extra-territorial application of national conservation measures in terms of participation in an appropriate MEA. The findings in the beef hormones case emphasise the critical role played by scientific evidence and consensus under the SPS Agreement in supporting any request for exceptions under Paragraph (b) of GATT Article XX. The findings did not provide support for the EU's Precautionary Principle, and this finding is likely to be repeated in the event of a GM case. The gasoline standards case and the asbestos case demonstrate that the WTO rules support nationally determined environmental and health and safety legislation rather than the lowest common international denominator. The asbestos case also highlights the potentially critical role that can be played by GATT Article III.4, like products, with respect to establishing grounds for distinguishing between harmful products and less harmful substitutes. It is interesting to conjecture whether the Appellate Body's interpretation of the meaning of "like product" can be extended to incorporate the consideration of joint products, both those scientifically quantifiable and those where decisions require a more qualitative assessment. If this were to be the case, it would be a significant step forward in the accommodation of crucial PPM issues within the existing WTO legal framework.

An important feature of all the cases discussed in this paper is the referral of the panels and Appellate Body to the Article XX *chapeau* after consideration of the relevant paragraphs of the article. A major factor in the apparent failure of some PPM cases is that, while found to be justified under one of paragraphs (b) or (g), they do not satisfy the requirements of the *chapeau* that the measures being examined be non-discriminatory. It was for this reason that the tuna–dolphin, shrimp–turtle and gasoline standards cases were all found to be inconsistent with the GATT/WTO rules.

The PPM cases dealt with by the WTO dispute settlement system to date have been relatively straightforward, and none have yet challenged import restrictions imposed upon products embodying child labour, prison labour, animal welfare standards and other issues of social concern. This is primarily because the industrialised countries have not utilised trade policy and protection to deal with these issues, possibly because measures were unlikely to be WTO-compatible, but instead

have relied upon alternative means, including consumer boycotts. The principle established in case law in the use of an Article XX(g) defence in conservation and environmental cases as being conditional upon the prior existence of an MEA indicates the way forward. The multilateral ILO binds its signatories to agreed core minimum labour standards – including restrictions on the use of child, forced, prison and slave labour – and the recognition of trade unions. It would therefore satisfy the same conditionality principle, in this case applied to Article XX(b) as "necessary to protect human, animal or plant life or health". Multilateral agreements on minimum animal welfare standards would also satisfy such conditionality applied to this paragraph. An alternative route is provided by Article XX(e), which already permits trade barriers to be used against products made with prison labour, although the extension of this paragraph would require consensus within the WTO.

The evolution of WTO case law with respect to PPM issues, as demonstrated in the cases included here, has shown itself to be both flexible and imaginative in recognising qualitative as well as scientifically verifiable evidence in panel and appellate body decisions. While the multilateral rules on international trade are by no means fully able to deal with the full range of PPM issues arising, the experience of the first decade of the WTO suggests that considerable progress has been made in spite of appearances to the contrary.

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Endnotes

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