

GMOs and Trade: Issues at Stake in the EC Biotech Dispute

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INTRODUCTION

The status of the relationship between genetically modified organisms (GMOs) and the trade related to them has become a crucial issue. While the questions of access to genetic resources and of the sharing of their financial benefits often position northern and southern countries on opposing sides, trade in GMOs creates new conflicts. Here, the confrontation is primarily transatlantic, between the USA, wishing to export a growing yield of genetically modified crops, and the EU, wishing not to receive them.¹ The USA and the EU, which are the two principal protagonists of world trade, have thus adopted completely opposite legal strategies.

The profound differences in the legal treatment of international trade of GMOs between the Member States of the World Trade Organization (WTO) have given rise to various disputes. In 2000, the first complaint dealing with trade in GMOs was commenced at the WTO. The request concerned the prohibition imposed by Egypt on the import of canned tuna from Thailand, suspected of being packed in genetically

modified soybean oil.² This complaint was resolved through consultations between Egypt and Thailand. This was followed in August 2003, when the USA decided to request the establishment of a WTO dispute-settlement panel to determine the compatibility of the so-called European *de facto* moratorium on GMOs with WTO rules.³ The actual dispute began in May 2003 when the USA, Argentina⁴ and Canada⁵

² *Egypt – Import Prohibition on Canned Tuna with Soybean Oil*, Request for Consultations by Thailand, WT/DS205/1 (27 September 2000).

³ In this article, we will not focus on the question of whether the so-called moratorium is a measure or a simple practice. We will base our analysis on the presumption that the *de facto* moratorium is a measure that can be brought under dispute in the WTO. In addition, due to the uncertain character of the European moratorium, the article will not deal with the issue of the so-called moratorium being a 'technical regulation' or not under the Technical Barriers to Trade Agreement.

⁴ *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Request for Consultations by Argentina, WT/DS293/1 (21 May 2003), at 1: 'As a global producer and exporter of biotechnology products, for Argentina the systemic and trade implications of the aforementioned measures constitute a clear nullification or impairment of its rights under the WTO Agreements. Since 1998, the European Communities has suspended consideration of applications for approval of biotechnology products. In addition, some of their member States have introduced prohibitions, even infringing Community rules for biotechnology products. In effect, Argentina indicates that the action by the European Communities is detrimental to international trade in biotechnology products, as can be seen from the following: (a) *de facto* measures leading to the suspension of consideration or the non-consideration of various applications without sufficient scientific evidence or a proper risk assessment; and (b) undue delay in finalizing consideration of various applications for approval of biotechnology products submitted by various WTO Members. This action affects biotechnology products approved for marketing in Argentina . . .'

⁵ *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Request for Consultations by Canada, WT/DS292/1 (21 May 2003), at 1: 'As a result of measures taken by EC Member States, including Austria, Belgium, Denmark, Finland, France, Germany, Greece, Italy, Luxembourg, the Netherlands, and Sweden, since 1998, the EC has maintained a *de facto* moratorium on the approval of GM products. The moratorium prevents GM products from accessing or proceeding through the EC's approvals process. As a consequence of the moratorium, Canadian GM products have been blocked at various stages of the EC's approval process. In addition, some EC Member States, including Austria, France, Greece, and Italy have prohibited the importation and marketing of GM products despite those products having been approved by the EC for importation and marketing.'

¹ However, several developing countries have also expressed their concerns, in particular with regard to the socio-economic consequences of the development of biotechnology in the field of agriculture. See 'La Chine engage une épreuve de force avec les Etats-Unis sur l'importation de soja génétiquement modifié' et 'Les petits pays réticents aux OGM subissent de fortes pressions de Washington', *Le Monde* (Tuesday, 15 January 2002), at 4. See Request to Join Consultations, Communication from Chile, WT/DS291/11 (13 June 2003), at 1: ' . . . The United States challenges the moratorium on the approval of biotech products applied by the European Communities since October 1998 and the marketing and import bans on such products maintained by some of its Member States. *De facto* import bans mean that substantial trade interest cannot be defined on the basis of trade volume, only on future expectations. Chile also has a substantial systemic interest in the proper implementation of the WTO Agreements, in particular the General Agreement on Tariffs and Trade 1994, the Agreement on Technical Barriers to Trade and the Agreement on the Application of Sanitary and Phytosanitary Measures. The improper application of the disciplines of these Agreements has trade implications for a country such as Chile. Finally, the direction taken by this dispute will prove significant for developing countries which, like Chile, are studying and evaluating national biotechnology policies, including regulations on the import, marketing, use, labeling and traceability of Genetically Modified Organisms (GMOs) and food containing GMOs'.

requested formal consultations at the WTO on this subject,⁶ arguing that the *de facto* European Community (EC) moratorium on imports of GMOs since 1999 arose rather out of trade protectionism than from concerns for consumer health or for the environment.

In their request for consultations,⁷ the USA stated that, since October 1998, the EC has applied a moratorium on the approval of biotech products and thus has suspended consideration of applications for biotech products under the EC approval system, as well as the granting of their approval. The USA argued that a number of applications for placing biotech products on the market had been blocked in the approval process under EC legislation⁸ and have never been considered for final approval. It argued that the approvals moratorium has restricted imports of agricultural and food products from the USA.⁹

Moreover, the USA considered that the Member States of the EC maintained a number of national marketing and import bans on biotech products, even though those products have already been approved by the EC for import into, and marketing in, the EC. The national marketing and import bans have restricted imports of agricultural and food products from the USA. According to the USA, these measures appear to be inconsistent with the General Agreement on Tariffs and Trade (GATT 1994), the WTO Sanitary and Phytosanitary Measures (SPS) Agreement, the Agriculture Agreement and the Technical Barriers to Trade (TBT) Agreement, including but not limited to the following provisions: GATT 1994, Articles I, III, X and XI; SPS Agreement, Articles 2, 5, 7 and 8, and Annexes B and

C; Agriculture Agreement, Article 4; and TBT Agreement, Articles 2 and 5.¹⁰

Despite attempts by the EC to avoid a dispute at the WTO on the question of GMOs,¹¹ the USA, Canada and Argentina requested the establishment of a panel to examine the question.¹² The EC did not hesitate to criticize the submission of this type of dispute to the WTO, with the European Commission stating:

[t]he Complainants in these proceedings are seeking to use the *WTO Agreement* to short circuit the responsible actions of the European Communities. The European Communities consider that the approach is entirely misconceived: it is not the function of the *WTO Agreement* to allow one group of countries to impose its values on another group. Nor is it the purpose of the *WTO Agreement* to trump the other relevant rules of international law which permit – or even require – a prudent and precautionary approach. There is a serious question as to whether the WTO is the appropriate international forum for resolving all the GMO issues that the Complainants have raised in these cases. The European

¹⁰ *Ibid.*, at 2. All these agreements are WTO agreements and are the result of the 1986–94 Uruguay Round negotiations, signed at the Marrakesh ministerial meeting in April 1994. The WTO Dispute Settlement Understanding (DSU) was also adopted at that time. All the WTO agreements are available at <http://www.wto.org/english/docs_e/legal_e/legal_e.htm>.

¹¹ See *European Commission Regrets US Decision to File WTO Case on GMOs as Misguided and Unnecessary*, Brussels, Press Release (13 May 2003), which states: 'EU Trade Commissioner Pascal Lamy said: "The EU's regulatory system for GMOs" authorization is in line with WTO rules: it is clear, transparent and non-discriminatory. There is therefore no issue that the WTO needs to examine. The US claims that there is a so-called 'moratorium' but the fact is that the EU has authorized GM varieties in the past and is currently processing applications. So what is the real US motive in bringing a case?" David Byrne, EU Commissioner for Health and Consumer protection stated: "We have been working hard in Europe to complete our regulatory system in line with the latest scientific and international developments. The finalization process is imminent. This is essential to restore consumer confidence in GMOs in Europe". Mr. Byrne recalled that it is the lack of consumer demand for GM-products that accounts for the low sales of GMOs in the EU market. "Unless consumers see that the authorization process is up to date and takes into account all legitimate concerns, consumers will continue to remain sceptical of GM products". EU Commissioner for the Environment Margot Wallstrom added: "This US move is unhelpful. It can only make an already difficult debate in Europe more difficult. But in the meantime, the Commission strongly believes that we in Europe should move ahead with completing our legislation on traceability and labelling and on food and feed, currently before the European Parliament. We should not be deflected or distracted from pursuing the right policy for the EU". The press release is available at <http://europa.eu.int/comm/trade/goods/agri/pr130503_en.htm>.

¹² *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Request for the Establishment of a Panel by the United States, WT/DS291/23 (8 August 2003); *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Request for the Establishment of a Panel by Canada, WT/DS292/17 (8 August 2003); *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Request for the Establishment of a Panel by Argentina, WT/DS293/17 (8 August 2003).

⁶ Requests to join consultations were deposited by Australia (WT/DS291/5 (10 June 2003)), India (WT/DS291/10 (12 June 2003)), Brazil (WT/DS291/8 (12 June 2003)), New Zealand (WT/DS291/6 (10 June 2003)), Peru (WT/DS291/2 (27 May 2003)), Mexico (WT/DS291/4 (5 June 2003)) and Colombia (WT/DS291/3 (4 June 2003)).

⁷ *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Request for Consultations by the United States, WT/DS291/1 (20 May 2003).

⁸ Directive 2001/18/EC of the European Parliament and of the Council of 12 March 2001 on the deliberate release into the environment of genetically modified organisms, [2001] OJ L106/1 (and its predecessor, Council Directive 90/220/EEC of 23 April 1990 on the deliberate release into the environment of genetically modified organisms, [1990] OJ L117/15, as amended by Commission Directive 94/15/EC of 15 April 1994, adapting to technical progress for the first time Council Directive 90/220/EEC on the deliberate release into the environment of genetically modified organisms, [1994] OJ L103/20 and Commission Directive 97/35/EC of 18 June 1997, adapting to technical progress for the second time Council Directive 90/220/EEC on the deliberate release into the environment of genetically modified organisms, [1997] OJ L169/72); and Regulation (EC) 258/97 of the European Parliament and of the Council of 27 January 1997 concerning novel foods and novel food ingredients, [1997] OJ L43/1.

⁹ *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Request for Consultations by the United States, n. 7 above, at 1.

Communities can only regret that the Complainants have chosen to start a dispute settlement procedure based on flawed premises, rather than to promote international co-operation as a means to build a sound international framework for addressing the GMO issue.¹³ (*italics in original*)

As goods, GMOs are subject to the disciplines of WTO law. The methods of its application, however, are neither simple nor obvious, due to both the diversity of GMOs and the risks that they are capable of carrying, and to the plurality of restrictive trade measures to which they can give rise. What is more, the WTO system itself, which is constituted through a series of different agreements, is complex. As noted above, trade in GMOs could be assessed, depending on the case, according to the SPS Agreement, TBT Agreement, or even according to GATT 1994. Assessment must be made on a case-by-case basis, according to the GMO in question and the risks it carries (sanitary and/or environmental). Without question, the interplay between the agreements of the WTO themselves on an issue such as that of GMOs is not clear and adds further complexity to their status under the WTO.

The relationship between GMOs and trade gives rise to several important legal issues, which will be examined in turn in light of the different scenarios that manifest themselves in the *EC – Biotech Case*.

ISSUES ARISING FROM GATT 1994

Several scenarios can be imagined in the relationship between GMO regulations – be they national or international – and GATT 1994: violation of the most-favoured-nation clause (Article I of GATT 1994); violation of the national treatment rules (Article III of GATT 1994); or violation of the prohibition on quantitative restrictions (Article XI of GATT 1994). Nevertheless, the scenario that seems to be the most obvious and the most complicated to understand is that of the violation of national treatment. Indeed, it would seem logical to ask ourselves the vital question of whether the prohibition on importing GMOs constitutes a violation of Article III of GATT 1994, due to the discrimination that would result for non-GMO products. The issue of *likeness* between GMO products and non-GMO products arises before our eyes. Then, in case we can assume that there is a true violation of Article III of GATT 1994 based principally on discrimination between like products, another scenario remains to be envisaged – that of Article XX of GATT 1994 as an exception justifying the violation of Article III.

¹³ *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, First Written Submission by the European Communities (17 May 2004), para. 10.

GMOS AND NON-GMOS: ARE THEY ‘LIKE PRODUCTS’?

The fundamental purpose of Article III is to avoid protectionism in the application of internal tax and regulatory measures. More specifically, the aim of Article III ‘is to ensure that internal measures “not be applied to imported or domestic products so as to afford protection to domestic production”’.¹⁴ To this end, Article III obliges members of the WTO to provide equality of competitive conditions for imported products in relation to domestic products.¹⁵

Some countries may allege that the GMO import regulations violate Article III(4) of GATT 1994. Article III(4) of GATT 1994 reads as follows:

The products of the territory of any contracting party imported into the territory of any other contracting party shall be accorded treatment no less favourable than that accorded to like products of national origin in respect of all laws, regulations and requirements affecting their internal sale, offering for sale, purchase, transportation, distribution or use. The provisions of this paragraph shall not prevent the application of differential internal transportation charges which are based exclusively on the economic operation of the means of transport and not on the nationality of the product.

Three cumulative elements need to be satisfied in order for a violation of Article III(4) to be established: (i) the imported and domestic products at issue are ‘like products’; (ii) the measures at issue are ‘laws, regulations, or requirements affecting their internal sale, offering for sale, purchase, transportation, distribution, or use’; (iii) the imported products are accorded ‘less favourable’ treatment than that accorded to like domestic products.¹⁶ As these criteria are cumulative, the fact that one is not satisfied is sufficient to conclude that Article III(4) of GATT 1994 has not been violated.

Regarding likeness, the fundamental question is simply whether the imported GMO products and domestic non-GMO products (i.e. conventional products) are ‘like products’. In the *EC Biotech* dispute, the USA, Canada and Argentina are proceeding on the basis that there is no difference between GM products and

¹⁴ *United States – Section 337 of the Tariff Act of 1930*, Report by the Panel adopted on 7 November 1989 (BISD 36S/345), para. 5.10. All Panel reports adopted from 1987 to 1989 within the framework of GATT 1947 are also available at <<http://www.sice.oas.org/dispute/gatt/ds8789.asp>>.

¹⁵ *United States – Taxes on Petroleum and Certain Imported Substances*, Report of the Panel adopted on 17 June 1987 (BISD 34S/136), para. 5.1.9; *Japan – Customs Duties, Taxes and Labeling Practices on Imported Wines and Alcoholic Beverages*, Report of the Panel adopted on 10 November 1987 (BISD 34S/83), para. 5.5(b).

¹⁶ WTO AB 11 December 2000, *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WT/DS161/AB/R, WT/DS169/AB/R (AB-2000-8), para. 133.

their non-GM conventional counterparts. Conversely, the EC submits that the only 'like' product to a given imported GM product is the same GM product cultivated or processed domestically.

It is important in the analysis of likeness to have as a basis for reflection the *dictum* of the Appellate Body in the *Japan – Taxes on Alcoholic Beverages Case*, which states:

... there can be no one precise and absolute definition of what is 'like'. The concept of 'likeness' is a relative one that evokes the image of an accordion. The accordion of 'likeness' stretches and squeezes in different places as different provisions of the WTO Agreement are applied. The width of the accordion in any one of those places must be determined by the particular provision in which the term 'like' is encountered as well as by the context and the circumstances that prevail in any given case to which that provision may apply.¹⁷

It is even more pertinent in the case of GMOs due to the proteiform character of the notion of GMOs *per se*. Clearly, a GMO is an organism in which the genetic material has been altered in a way that does not occur naturally by mating and/or natural recombination. In different fora, GMOs are referred to as 'living modified organisms' (LMOs),¹⁸ 'genetically engineered organisms' and 'transgenic organisms'. Although this palette of terminology refers to the same or similar processes, it may seem difficult to conclude that they are perfectly alike.¹⁹

Without dwelling upon the regulatory implications of the use of the concept of substantial equivalence,²⁰ two key elements could be taken into account to illustrate that GMO products are not 'like' non-GMO products. One element is procedural and the other is material.

Regarding the procedural element, the international community has, through the Cartagena Protocol on Biosafety,²¹ recognized that GM products are such that

they require their own, distinct authorization procedure.²² Indeed, for the transboundary movement of some LMOs,²³ the Biosafety Protocol requires the parties to follow the procedure of advance informed agreement (AIA).²⁴ AIA consists of three steps: notification; acknowledgement of notification; and decision. The party of export has the obligation to notify in writing the party of import prior to the intentional transboundary movement of an LMO.²⁵ The party of import has different options: to approve the import without conditions; to approve the import with conditions; to prohibit the import; to request additional information; or to extend the procedure by a defined period of time.²⁶ In the event that there is a lack of scientific certainty regarding the extent of potential adverse effects, the party of import retains the right to take a decision in order to avoid or minimize such potential adverse effects. The procedural aspect thus illustrates that GM products are specific products and are not subjected to the same legal regime as non-GM products.²⁷ This is the first distinguishing element to suggest that they are not 'like' products.

A relevant material element relates to the potential risks linked to the spread of GMOs in the environment and to the consumption of GMOs. Scientific knowledge of genetics is limited.²⁸ As explained by an independent

¹⁷ WTO AB 4 October 1996, *Japan – Taxes on Alcoholic Beverages*, WT/DS10/AB/R, WT/DS11/AB/R, WT/DS8/AB/R (AB-1996-2), at 23.

¹⁸ See Cartagena Protocol on Biosafety to the Convention on Biological Diversity (Montreal, 29 January 2000), available at <<http://www.biodiv.org/doc/legal/cartagena-protocol-en.pdf>> (hereinafter 'the Biosafety Protocol').

¹⁹ For instance, in the *EC Biotech* dispute, the complainants (USA, Argentina, Canada) have chosen the expression 'biotech products', whereas the EC has opted for the term 'GMOs'.

²⁰ For developments on this concept, see T. Christoforou, 'The Regulation of Genetically Modified Organisms in the European Union: The interplay of Science, Law and Politics', 41:3 *Common Market Law Review* (2004), 651–655.

²¹ See also Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters (Aarhus, 25 June 1998), Article 2(3): 'Environmental information' means any information in written, visual, aural, electronic or any other material form on: (a) the state of elements of the environment, such as air and atmosphere, water, soil, land, landscape and natural sites, biological diversity and its components, including *genetically modified organisms*, and the interaction among these elements ...' (emphasis added).

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²² B. Eggers and R. Mackenzie, 'The Cartagena Protocol on Biosafety', 3:3 *Journal of International Economic Law* (September 2000), 525–543.

²³ LMOs can be seen as a sub-set of GMOs, which includes any living organism.

²⁴ The AIA applies only to the 'first intentional transboundary movements of living modified organisms for the intentional introduction into the environment of the Party of import' (see Biosafety Protocol, n. 18 above, Article 7(1)). This concerns, for example, the transboundary movement of genetically modified seeds or fish destined to be released into the environment. The transboundary movement of LMOs 'intended for direct use as food or feed, or for processing' has been excluded from the AIA procedure (Article 7(4)).

²⁵ Biosafety Protocol, n. 18 above, Article 8.

²⁶ *Ibid.*, Article 10(3).

²⁷ National practices also consider GMOs as products with specificities. An analysis based on 16 countries (Australia, Bulgaria, Denmark, EC, Hungary, India, Malaysia, Mexico, New Zealand, Nigeria, Norway, Philippines, China, Sweden, UK and USA) shows that only two countries out of the 16 surveyed (Australia and the USA) do not have any legislation or regulation that deals specifically with GMOs as a distinct subject matter of regulation. Furthermore, out of all the 16 countries surveyed, it is only the USA that imposes the regulatory presumption of 'safeness' as opposed to 'riskiness' with respect to GMO import regulation; see, for more details, V.P.B. Yu III, 'Compatibility of GMO Import with WTO Rules', in E. Brown Weiss and J.H. Jackson (eds), *Reconciling Trade and Environment* (Transnational Publishers, 2001), at 587. See also H. Baumüller, *Domestic Import Regulations for Genetically Modified Organisms and their Compatibility with WTO Rules – Some Key Issues* (IISD-ICTSD Trade Knowledge Network, 2003), available at <<http://www.tradeknowledgenetwork.net/publication.aspx?id=587>>.

²⁸ See *amicus curiae* brief submitted by an international coalition of 15 public interest groups to the biotech dispute (27 May 2004), para. 25: 'Uncertainty continues to surround the potential for adverse impacts on human health from GM food consumption. Whilst the potential

group of experts (the UK's Science Review Panel) established in 2003 by the UK Government to review the science relevant to GM crops and foods:

the main special feature of GM plant breeding is that it allows a wider choice of genes for modifying crops in novel ways. No other plant breeding technique permits the incorporation of genetic material from such diverse biological sources. Inevitably this raises the possibility that some new consequences of GM plant breeding may be unexpected.²⁹

The UK's Science Review Panel also said:

To date worldwide there have been no verifiable untoward toxic or nutritionally deleterious effects resulting from the cultivation and consumption of products from GM crops. However, absence of readily observable adverse effects does not mean that these can be completely ruled out and there has been no epidemiological monitoring of those consuming GM food.³⁰

These risks of 'harm' or 'danger' linked to the dissemination or consumption of GMOs are essential in the analysis of the likeness between GM products and conventional products. In the *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products Case*, one of the key contributions of the WTO Appellate Body was the development of law relating to criteria for establishing likeness between products.³¹ There are two important points to underline. On one hand, the Appellate Body emphasized the importance of the criteria of 'consumers' tastes and habits', explaining that:

evidence relating to consumers' tastes and habits would establish that the *health risks* associated with chrysotile asbestos fibres *influence consumers' behaviour* with respect to the different fibres at issue . . . Consumers' tastes and habits regarding *fibres*, even in the case of commercial parties, such as manufacturers, are very likely to be shaped by the health risks associated with a product which is known to be highly carcinogenic. A manufacturer cannot, for instance, ignore the preferences of the ultimate consumer of its

products. If the risks posed by a particular product are sufficiently great, the ultimate consumer may simply cease to buy that product.³²

From that perspective, the Appellate Body judged that the 'risk' criterion (that is, health risks) is pertinent to the test of the likeness of products, thereby attenuating an exclusively 'economic' interpretation of likeness.³³ Even if the degree of 'riskiness' of GMOs is not equivalent – at least according to current science – to the degree of danger of asbestos, the scientific uncertainty that characterizes the risks linked to GMOs, nonetheless, justifies that GMOs should not be treated in a similar manner to non-GMO products. However, it is appropriate to consider the contrary hypothesis, which would be to conclude that the two categories are like products and, therefore, concomitantly, that Article III of GATT 1994 has been violated. Thus, we must examine whether the derogatory mechanism of Article XX of GATT 1994 permits discrimination between GM products and non-GM products.

IS DIFFERENT TREATMENT BETWEEN GMO AND NON-GMO PRODUCTS JUSTIFIED UNDER ARTICLE XX OF GATT 1994?

Two subparagraphs of Article XX are particularly apposite to the analysis of Article XX: Article XX(b) and Article XX(g).

Article XX(b) provides for the possibility of restrictions on trade through measures that are 'necessary to protect human, animal or plant life or health'. In the interpretation of necessity, the case law of dispute-settlement bodies under GATT 1994 and the WTO has frequently emphasized the existence of one or more alternative measures to the initial restrictive measure which would permit the same health objectives to be attained.

In determining whether a suggested alternative measure is 'reasonably available', several factors must be taken into account, besides the difficulty of implementation. In *Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes*, the panel made the following observations on the applicable standard for evaluating whether a measure is 'necessary' under Article XX(b):

The import restrictions imposed by Thailand could be considered to be 'necessary' in terms of Article XX(b) only if

for harm arising is widely recognized, such as through the unintentional introduction of a new allergen or toxin, there is little evidence to call upon to support the claims of safety of GM foods', available at <<http://www.genewatch.org/WTO/Amicus/PublicInterestAmicus.pdf>>.

²⁹ UK GM Science Review Panel, *An Open Review of the Science Relevant to GM Crops and Food Based on the Interests and Concerns of the Public* (2003), First Report (Executive Summary), at 10, available at <www.gmsciencedebate.org.uk/report/pdf/gmsci-report1-pt1.pdf>.

³⁰ Ibid.

³¹ It should be recalled that the general criteria for analysing likeness were essentially set out in the *Report of the Working Group on Border Tax Adjustments*, adopted on 2 December 1970 (BISD 18S/105), also available at <<http://www.worldtradelaw.net/reports/gattpanels/bordertax.pdf>>. These criteria relate to: (i) the properties, nature and quality of the products; (ii) the end uses of the products; (iii) consumers' tastes and habits; and (iv) the tariff classification of the products. This approach has been followed and developed by many panels and by the Appellate Body.

³² WTO AB 12 March 2001, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R (AB-2000-11) (hereinafter 'the *Asbestos Case*'), para. 122.

³³ The Appellate Body considers 'risk' to be a sub-criteria that is transplanted onto the examination of the criteria of 'properties of products' and/or the criteria of 'consumers' tastes and habits'. Ibid., para. 122.

there were no alternative measure consistent with the General Agreement, or less inconsistent with it, which Thailand could reasonably be expected to employ to achieve its health policy objectives.³⁴ (emphasis added)

In *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, the Appellate Body observed that one aspect of the ‘weighing and balancing process . . . comprehended in the determination of whether a WTO-consistent alternative measure’ is reasonably available is the extent to which the alternative measure ‘contributes to the realization of the end pursued’.³⁵ Furthermore, the Appellate Body stated that ‘[t]he more vital or important [the] common interests or values’ pursued, the easier it would be to accept as ‘necessary’ measures designed to achieve those ends.³⁶

Applying this reasoning to the *Asbestos Case*, the Appellate Body considered that the objective pursued by the French measure was the preservation of human life and health through the elimination, or reduction, of the well-known, and life-threatening, health risks posed by asbestos fibres, and thus concluded that the value pursued is both vital and important in the highest degree.³⁷ GMO regulations or measures related to GMOs aim, in principle, to protect the environment and health; from this perspective, they appear to pursue a ‘vital and important common value’. The remaining question, then, is whether there is an alternative measure that would achieve the same end and that is less restrictive of trade than a stated measure on the import of GMOs. If not, we can conclude that the ‘necessity’ of the measure and the test of paragraph (b) of Article XX would be satisfied.

Article XX offers another track: that of paragraph (g), which authorizes the enactment of restrictive trade measures ‘relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption’. The Appellate Body, by giving a broad interpretation to the concept of exhaustible natural resources, opened a gap in the WTO system. In the *Shrimp Turtle Case*, it considered that:

[t]extually, Article XX (g) is not limited to the conservation of ‘mineral’ or ‘non-living’ natural resources. We do not believe that ‘exhaustible’ natural resources and ‘renewable’ natural resources are mutually exclusive. One lesson that modern biological sciences teach us is that living species, though in principle, capable of reproduction and, in that sense, ‘renewable’, are in certain circumstances indeed

susceptible of depletion, exhaustion and extinction, frequently because of human activities. Living resources are just as ‘finite’ as petroleum, iron ore and other non-living resources.³⁸ (emphasis added)

In light of this passage, one cannot deny that biological diversity truly constitutes an ‘exhaustible natural resource’. Referring to the international regulation of GMOs, principally through the Cartagena Protocol on Biosafety, it appears that one of the aims of this instrument is precisely to prevent GMOs from causing loss to biological diversity:

. . . the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity . . .³⁹ (emphasis added)

From this perspective, GMO regulations such as the so-called *de facto* moratorium could be legally assimilated to measures ‘relating to the conservation of exhaustible natural resources’ within the meaning of Article XX(g) of GATT 1994.

ISSUES ARISING FROM THE SPS AGREEMENT AND THE TBT AGREEMENT

Among the WTO agreements concerning restrictions on international trade of GMOs, two agreements are fundamental and inescapable: the SPS Agreement and the TBT Agreement. These two agreements are at the centre of the lively controversy between the different parties to the *EC Biotech Case* as to the scope of the dispute.

IS THERE A DIFFERENCE BETWEEN THE SPS AND THE TBT IN THE TAKING INTO ACCOUNT OF ‘SANITARY AND ENVIRONMENTAL’ RISKS?

The most important question in the test for applicability of the SPS Agreement is whether GMO import regulations are only SPS measures within the meaning of the SPS

³⁴ *Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes*, Report of the Panel adopted on 7 November 1990 (BISD 37S/200), para. 75.

³⁵ See *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, n. 16 above, paras 163 and 166.

³⁶ *Ibid.*, para. 162.

³⁷ See *Asbestos Case*, n. 32 above, at para. 172.

³⁸ WTO AB 12 October 1998, *United States – Import Prohibition of Certain Shrimp and Shrimp Products* (hereinafter ‘the *Shrimp Turtle Case*’), WT/DS58/AB/R (AB-1998-4), para. 128.

³⁹ See also Biosafety Protocol, Article 2, para. 2, which states ‘The Parties shall ensure that the development, handling, transport, use, transfer and release of any living modified organisms are undertaken in a manner that prevents or reduces the risks to biological diversity . . .’.

Agreement. It seems that the SPS Agreement is not intended to apply to all products and all risks. Annex A, point 1 of the SPS Agreement defines a 'sanitary or phytosanitary measure', stating that a 'SPS measure' is 'any measure applied':

- (a) to protect animal or plant life or health within the territory of the member from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms;
- (b) to protect human or animal life or health within the territory of the member from risks arising from additives, contaminants, toxins or disease-causing organisms in foods, beverages or feedstuffs;
- (c) to protect human life or health within the territory of the member from risks arising from diseases carried by animals, plants or products thereof, or from the entry, establishment or spread of pests; or
- (d) to prevent or limit other damage within the territory of the member from the entry, establishment or spread of pests.

It is not necessary here to engage in the debate as to whether the SPS Agreement depends on the effect of a measure or on the purposes of that measure. The concept of object and purpose frequently encountered in treaty law illustrates that it would be almost impossible or even risky to seek to distinguish concretely between the purpose and the effect sought by a given rule or procedure.

The solution concerning the field of application of SPS measures must be sought as much in the TBT Agreement as in the SPS Agreement. According to Article 1(5) of the TBT Agreement, '[t]he provisions of this Agreement do not apply to sanitary and phytosanitary measures as defined in Annex A of the Agreement on the Application of Sanitary and Phytosanitary Measures'. How can we interpret such a formulation? A reading of the Preamble of the TBT Agreement makes clear that that Agreement has a broader field of application than the SPS Agreement. First, the TBT Agreement is as concerned with sanitary and phytosanitary aspects as it is with environmental aspects *per se*. The Preamble states:

Recognizing that no country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment.

Second, the TBT Agreement enjoys a kind of 'residual competence', whereas the SPS Agreement has only its 'attributed competence'.⁴⁰ The field of application of the SPS Agreement is defined by a limitative enumeration

⁴⁰ This point is reflected in the SPS Agreement, Article 1(4): 'Nothing in this Agreement shall affect the rights of Members under the Agreement on Technical Barriers to Trade with respect to measures not within the scope of this Agreement'.

of SPS measures. This is why it would be inadequate to affirm absolutely that the SPS Agreement covers environmental risk *lato sensu*. The SPS Agreement only covers environmental risk in a limited manner through phytosanitary considerations. The protection of plant life or health 'from risks arising from the entry, establishment or spread of pests, diseases, disease-carrying organisms or disease-causing organisms'⁴¹ constitutes as much a sanitary objective as an environmental one. Also, Article 5(2) of the SPS Agreement illustrates that the environmental risk is not something totally unknown in the framework of that Agreement:

[i]n the assessment of risks, Members shall take into account available scientific evidence; relevant processes and production methods; relevant inspection, sampling and testing methods; prevalence of specific diseases or pests; existence of pest- or disease-free areas; relevant *ecological and environmental conditions*; and quarantine or other treatment. (emphasis added)

All other environmental risks come under the TBT Agreement.

Contrary to the claims of Argentina, Canada and the USA, the dispute on the *de facto* moratorium in the *EC Biotech Case* cannot be limited to the SPS Agreement nor can it be conceived that the TBT Agreement is only concerned in a residual or alternative manner.⁴² As the WTO Appellate Body affirmed in *Korea – Dairy Safeguards*, '[i]t is now well established that the WTO Agreement is a "Single Undertaking" and therefore all WTO obligations are generally cumulative and Members must comply with all of them simultaneously'.⁴³

CAN SCIENTIFIC UNCERTAINTY RELATED TO GMOS BE RECONCILED WITH THE SCIENTIFIC REQUIREMENTS OF THE SPS AGREEMENT?

Precaution is at the heart of EC legislation regarding GMOs, but also at the heart of international regulation

⁴¹ SPS Agreement, Annex A, para. 1(a).

⁴² See *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, First Submission of the United States (21 April 2004); *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, First Submission of Canada (21 April 2004); *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, Oral Statement by the United States (2 June 2004). All the documents are available at <<http://www.trade-environment.org/page/theme/tewto/biotechcase.htm>>.

⁴³ WTO AB 14 December 1999, *Korea – Definitive Safeguard Measure on Imports of Certain Dairy Products*, WT/DS98/AB/R (AB-1999-8), para. 74. See also, WTO AB 21 February 1997, *Brazil – Measures Affecting Desiccated Coconut*, WT/DS22/AB/R (AB-1996-4), at 12: 'Unlike the previous GATT system, the *WTO Agreement* is a single treaty instrument which was accepted by the WTO Members as a "single undertaking".'

of GMOs.⁴⁴ Article 1 of the Cartagena Protocol on Biosafety specifies that:

In accordance with the precautionary approach . . . the objective of this Protocol is to contribute to ensuring an adequate level of protection in the field of safe transfer, handling and use of living modified organisms resulting from modern biotechnology that may have adverse effects on the conservation and sustainable use of biological diversity, taking also into account risks to human health. . . .⁴⁵

The dispute-settlement bodies of the WTO have, however, shown some reticence regarding the application of precaution in the settlement of the disputes of which they are seized, because it is not expressly incorporated in the SPS Agreement.

Although the WTO Appellate Body abstained from taking a position on the status of the precautionary principle and refused, as a result, to recognize its prevalence in the rights and obligations contained in the WTO Agreements – and particularly the SPS Agreement – it has considered it as a principle contained in the *corpus juris* in force within the WTO, i.e. in Article 5(7) of the SPS Agreement.⁴⁶ Article 5(7) functions as ‘a *qualified exemption*’⁴⁷ of the obligation stated in Article 2(2) of the SPS Agreement⁴⁸ not to maintain SPS measures without sufficient scientific evidence. However, this exemption treatment renders the ambit of precaution rather limited in the framework of the WTO. It is sufficient to refer to the

rigour of the criteria for application of Article 5(7) to be convinced.⁴⁹

Predictability remains a fundamental principle of the multilateral trade system and makes its mark on the apprehension of risk and the WTO conception of risk assessment. Thus, the concept of ‘scientifically identifiable risk’ developed by the Panel and the Appellate Body in the *Hormones Case*⁵⁰ predominated over that of scientifically ‘uncertain risk’ intrinsic to precaution. The Appellate Body declared that:

the requirements of a risk assessment under Article 5(1) [of the SPS Agreement], as well as of ‘sufficient scientific evidence’ under Article 2(2) [of the SPS Agreement], are essential for the maintenance of the delicate and carefully negotiated balance in the SPS Agreement between the shared, but sometimes competing, interests of promoting international trade and of protecting the life and health of human beings.⁵¹

Within the WTO, each State can make use of its own law to determine the level of protection of the environment or health that it deems appropriate. Consequently, it may apply measures, including measures founded on precaution, which carry a higher level of protection than that founded in relevant international standards or recommendations. Nonetheless, the obligation of ‘objective’ assessment of risk persists even in the context of scientific uncertainty.

Precaution has a triple dimension. It requires that a ‘methodology of precaution’ be applied to the whole process of analysis of environmental or sanitary risk, which consists of three stages: evaluation, management and communication. This may seem contrary to WTO law having regard, for example, to paragraph 4 of Annex A of the SPS Agreement, which requires that an assessment of risks related to phytosanitary measures must deal with the ‘probability’ of the entry, establishment or spread of the disease. As the Appellate Body specified, the assessment of ‘probability’

⁴⁴ L. Boisson de Chazournes *et al.*, ‘The Biosafety Protocol: Regulatory Innovation and Emerging Trends’, 10:4 *Swiss Review of International and European Law* (2000), 513–557.

⁴⁵ Biosafety Protocol, n. 18 above, Article 10, para. 6 states that: ‘Lack of scientific certainty due to insufficient relevant scientific information and knowledge regarding the extent of the potential adverse effects of a living modified organism on the conservation and sustainable use of biological diversity in the Party of import, taking also into account risks to human health, shall not prevent that Party from taking a decision, as appropriate, with regard to the import of the living modified organism in question . . . in order to avoid or minimize such potential adverse effects’.

⁴⁶ SPS Agreement, Article 5(7) reads as follows: ‘In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time’.

⁴⁷ WTO AB 22 February 1999, *Japan – Measures Affecting Agricultural Products*, WT/DS76/AB/R (AB-1995-5), para. 80.

⁴⁸ SPS Agreement, Article 2(2) reads: ‘Members shall ensure that any sanitary or phytosanitary measure is applied only to the extent necessary to protect human, animal or plant life or health, is based on scientific principles and is not maintained without sufficient scientific evidence . . .’.

⁴⁹ In the *Japan – Measures Affecting Agricultural Products Case*, the Appellate Body observed that Article 5(7) sets out four requirements that must be satisfied in order for a measure to be justified. These requirements, which are cumulative, are the following: if the measure is (i) imposed in respect of a situation where ‘relevant scientific information is insufficient’; (ii) adopted ‘on the basis of available pertinent information’. Pursuant to the second sentence of Article 5(7), such a provisional measure may not be maintained unless the member that adopted the measure (iii) ‘seek[s] to obtain the additional information necessary for a more objective assessment of risk’; and (iv) ‘review[s] the . . . measure accordingly within a reasonable period of time’. See *Japan – Measures Affecting Agricultural Products*, n. 47 above, para. 89.

⁵⁰ WTO AB 16 January 1998, *EC Measures Concerning Meat and Meat Products* (hereinafter ‘the *Hormones Case*’), WT/DS26/AB/R, WT/DS48/AB/R (AB-1997-4), para. 186.

⁵¹ *Ibid.*, para. 177.

goes beyond the simple identification of 'possibilities', such as would be suggested by precaution. In the words of the Appellate Body, "[p]robability" implies a higher degree or a threshold of potentiality or possibility'.⁵²

Nevertheless, some elements militate in favour of an application of precaution in the treatment of risk by the WTO. The Panel charged with the *Asbestos Case* admitted that it is not possible to require a level of absolute certainty from a member who wishes to invoke Article XX of GATT 1994. It stated: 'to make the adoption of health measures concerning a definite risk depend upon establishing with certainty a risk . . . would have the effect of preventing any possibility of legislating in the field of public health'.⁵³ The interpretation by the dispute-settlement bodies of the scope of risk assessment constitutes another factor favouring the acceptance of a precautionary treatment of risk in the WTO framework. The *Australia – Measures Affecting Importation of Salmon Case* provided an opportunity for the Appellate Body to explain that 'the "risk" evaluated in a risk assessment must be an ascertainable risk . . . This does not mean, however, that a Member cannot determine its own appropriate level of protection to be "zero risk"'.⁵⁴ Finally, the evaluation of risk on which a measure is based can include unquantifiable data of a factual or qualitative nature and is not exclusively limited to purely quantitative scientific data. This interpretation was confirmed in the *Hormones Case* by the Appellate Body of the WTO, which rejected the initial interpretation of the Panel, according to which the evaluation of risk would have to be quantitative and establish a minimum level of risk. Do these openings enable us to affirm that scientific uncertainty has a place at the WTO?

Scientific uncertainty governs *ex ante* the invocation of precaution. The recognition of these criteria by the WTO remains hazy and 'relative'. In the report of the Appellate Body in the *Hormones Case*, it was recalled that 'responsible and representative governments may act in good faith on the basis of what, at a given time, may be a divergent opinion coming from qualified and respected sources'.⁵⁵ The Appellate Body stated in the *Asbestos Case* that:

[i]n justifying a measure under Article XX(b) of the GATT 1994, a Member may also rely, in good faith, on scientific sources which, at that time, may represent a

divergent, but qualified and respected, opinion. A Member is not obliged, in setting health policy, automatically to follow what, at a given time, may constitute a majority scientific opinion. Therefore, a panel need not, necessarily, reach a decision under Article XX(b) of the GATT 1994 on the basis of the 'preponderant' weight of the evidence.⁵⁶

Precaution is thus not necessarily exercised on the basis of scientific majority opinion. It grants significant weight to minority scientific opinion, as long as such opinion is serious and respected. Scientific uncertainty may be given considerable legitimacy at the WTO.

Nonetheless, we must keep this concept in perspective given the difficulty for the criteria of scientific uncertainty to be established on the basis of Article 5(7) of the SPS Agreement, the latter constituting the primary receptacle of precaution in the WTO. In the recent *Japan – Measures Affecting the Importation of Apples Case*, the Appellate Body concluded that:

[t]he application of Article 5(7) is triggered not by the existence of scientific uncertainty, but rather by the insufficiency of scientific evidence. The text of Article 5(7) is clear: it refers to 'cases where relevant scientific evidence is insufficient', not to 'scientific uncertainty'. The two concepts are not interchangeable. Therefore, we are unable to endorse Japan's approach of interpreting Article 5(7) through the prism of 'scientific uncertainty'.⁵⁷

ISSUES ARISING FROM THE CARTAGENA PROTOCOL ON BIOSAFETY

SHOULD WTO AGREEMENTS BE READ IN 'CLINICAL ISOLATION' FROM THE BIOSAFETY PROTOCOL?

The elaboration of the legal regime applicable to GMOs was completed in stages. The adoption, in 1992, of the programme of action in Agenda 21⁵⁸ advocated the development of international cooperation on 'biosafety'. The Convention on Biological Diversity, adopted in 1992, foresaw the elaboration of a protocol

⁵² Ibid., para. 184.

⁵³ WTO 18 September 2000, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R, para. 8.221.

⁵⁴ WTO AB 20 October 1998, *Australia – Measures Affecting the Importation of Salmon*, WT/DS18/AB/R (AB-1998-5), para. 126.

⁵⁵ *Hormones Case*, n. 50 above, para. 194.

⁵⁶ See *Asbestos Case*, n. 32 above, para. 178.

⁵⁷ WTO AB 15 December 2003, *Japan – Measures Affecting the Importation of Apples*, WT/DS245/AB/R (AB-2003-4), para. 184.

⁵⁸ See Agenda 21, 1992 Report of the United Nations Convention on Environment and Development, I (UN Doc. A/CONF.151/26/Rev. 1, 1992), printed in 31 ILM (1992), 874, chapter 16, available at <<http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter16.htm>>.

in this area.⁵⁹ The adoption of a protocol dedicated to these issues was rapidly envisaged, but several years of arduous negotiations were necessary in order to arrive at it. The Cartagena Protocol on Biosafety was adopted on 29 January 2000. On the whole, its contents seem rather protective, in accordance with the wishes of the EU and developing countries. Among the noteworthy advances made by the Protocol are the conferral of a broad field of application; the establishment of an advance informed agreement procedure (as noted above) that permits a State to refuse to import a GMO; the acquisition by the precautionary principle of an operational character; and the creation of the obligation to label GMOs. The Protocol also takes into consideration the needs of developing countries and is aimed at strengthening or developing their 'capacities' with regard to biosafety. At the same time, the adopted text reflects compromises. Some lack of precision or lacunae occur in the text as concessions to GMO exporter countries. There are many problems to resolve before the Protocol can be effectively implemented and fulfil the rather ambitious objectives that have been assigned to it.

Moreover, on a universal level, international trade in GMOs must also be considered with regard to WTO law. Until the entry into force of the Protocol, WTO law was the only applicable law. Since the entry into force of the Protocol on 11 September 2003, the two legal systems apply concomitantly.⁶⁰ However, they answer to rather different logic: to facilitate free trade on one hand, and, on the other, to make it safe, if necessary by restricting it for environmental or health reasons. The fact that trade in GMOs is treated in parallel in the context of the Biodiversity Convention system and in the WTO system may cause some difficulty in the interplay between the regimes.

The definition of the field of application *ratione materiae* of the Protocol was among the key stakes of the negotiations. Some wished that it would only address GMOs destined to be introduced into the environment, such as seeds, which alone are capable of threatening the environment and biodiversity. Others envisioned a much vaster field of application, embracing, aside from agricultural products, GMOs used for human or animal food, directly or after transformation, and GMOs used for medicine. In the end, an intermediate solution was accepted.

⁵⁹ See Convention on Biological Diversity (Rio de Janeiro, 5 June 1992), Article 19, para. 3: 'The Parties shall consider the need for and modalities of a protocol setting out appropriate procedures, including, in particular, advance informed agreement, in the field of the safe transfer, handling and use of any living modified organism resulting from biotechnology that may have adverse effect on the conservation and sustainable use of biological diversity'.

⁶⁰ The Biosafety Protocol has not been ratified by all State members of the WTO, in particular by the USA, which remains one of the principal protagonists in the field of trade in GMOs.

The Protocol does not use the usual expression of genetically modified organism, but rather prefers, as noted above, the expression 'living modified organisms' (LMOs) defined as 'any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology'.⁶¹ The concept of genetic modification is difficult to discern, and, here, there is recourse to biotechnical techniques that enable the definition of modified organisms. A living organism is 'any biological entity capable of transferring or replicating genetic material, including sterile organisms, viruses and viroids'.⁶² By 'living', the Protocol thus means active biological products, such as seeds and untransformed agricultural products destined for human or animal alimentation (cereals). Derivative products, such as oil or flour, tomato sauce, eggs from hens fed with transgenic corn that cannot reproduce or transfer genetic material, are thus excluded from the application of the Protocol.

The Biosafety Protocol governs the international trade of GMOs without, however, clearly defining its relationship to the WTO Agreements.⁶³ The limitations of the Biosafety Protocol were intentionally specified in the Preamble of the text itself: '*[e]mphasizing that this Protocol shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreements*' even though it also states that '*trade and environment agreements should be mutually supportive with a view to achieving sustainable development*' (emphasis added).

In the face of such provisions, how should the WTO dispute-settlement bodies react?⁶⁴ *A priori*, Article 30 of the Vienna Convention on the Law of Treaties (1969)⁶⁵ cannot apply because the Protocol itself denies *expressis verbis* that it is a *lex specialis* in the

⁶¹ Biosafety Protocol, n. 18 above, Article 3.

⁶² *Ibid.*, Article 3(g).

⁶³ R. Romi, 'Le Protocole sur la biosécurité: une étape vers l'écologisation des échanges économiques internationaux', 115 *Les petites Affiches* (9 June 2000), at 4; S. Maljean-Dubois, 'Le Protocole de Carthagène sur la biosécurité et le commerce international des organismes génétiquement modifiés', 11 *L'Observateur des Nations Unies* (Winter 2001), 41–66;

⁶⁴ See L. Boisson de Chazournes and M.M. Mbengue, 'Le rôle des organes de règlement des différends de l'OMC dans le développement du droit: à propos des OGM', in J. Bourrinet and S. Maljean-Dubois (eds), *Le commerce des organismes génétiquement modifiés* (La Documentation française, 2002), 177–212.

⁶⁵ Convention on the Law of Treaties (Vienna, 22 May 1969). According to Article 30, para. 2: '[w]hen a treaty specifies that it is subject to, or that it is not to be considered as incompatible with, an earlier or later treaty, the provisions of that other treaty prevail'. Likewise, Article 30, para. 3 poses problems of application given that it provides that 'when all the parties to the earlier treaty are parties also to the later treaty but the earlier treaty is not terminated or suspended in operation . . . the earlier treaty applies only to the extent that its provisions are compatible with those of the later treaty'.

sphere of international trade law.⁶⁶ Can the WTO dispute-settlement bodies nonetheless take inspiration from the provisions of the Protocol at the risk of attenuating the scope of the WTO Agreements? The hesitation, if not manifest reticence, of the WTO dispute-settlement bodies to take into account agreements negotiated outside of the WTO leaves some doubt as to the applicability *ipso jure* of some international environmental protection instruments containing trade measures, including the Biosafety Protocol.⁶⁷

The dispute-settlement bodies are reticent to have systematic recourse to international treaty and customary law,⁶⁸ insofar as the WTO agreements constitute a *lex specialis* in relation to general international law.⁶⁹ This status of *lex specialis* in the international legal order and, by extension, the limited competence of dispute-settlement bodies, must, nonetheless, be put into perspective. The WTO dispute-settlement mechanism is not a hermetic system and is not 'hostile' to general international law.⁷⁰ As the Appellate Body solemnly affirmed in the first case that came before it,⁷¹ 'the General Agreement is not to be read in clinical isolation from public international law'.⁷² In the *Korea – Measures Affecting Government Procurement Case*, the Panel confirmed that:

Article 3(2) of the [Dispute Settlement Understanding] requires that we seek within the context of a particular dispute to clarify the existing provisions of the WTO

⁶⁶ See Biosafety Protocol, n. 18 above, Preamble: '[e]mphasizing that this Protocol shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreements . . .'

⁶⁷ See R. Housman and D.M. Goldberg, 'Legal Principles in Resolving Conflicts Between Multilateral Environmental Agreements and the GATT/WTO in the Use of Trade Measures', in R. Housman *et al.* (eds), *The Use of Trade Measures in Select Multilateral Environmental Agreements* (United Nations Environment Programme and Center for International Environmental Law, 1995), 297.

⁶⁸ See M. Garcia-Rubio, *On the Application of Customary Rules of State Responsibility by the WTO Dispute Settlement Organs. A General International Law Perspective* (IHEI, 2001), at 73–78.

⁶⁹ The regime of WTO agreements has been identified in some respects as a 'self-contained regime'. Consequently, it contains rules that are specific to the WTO system, which can derogate from general international law. The derogatory nature does not, however, entail total isolation from the system of international law. On this issue, see L. Boisson de Chazournes, *Les contre-mesures dans les relations internationales économiques* (Pedone, 1992), at 182–187; and P.J. Kuijper, 'The Law of GATT as a Special Field of International Law', XXV *Netherlands Yearbook of International Law* (1994), 227. On the concept of 'self-contained regime', see B. Simma, 'Self-contained Regime', XVI *Netherlands Yearbook of International Law* (1985), 111–136.

⁷⁰ Conversely, the WTO Dispute Settlement Understanding, Article 3(2) (see n. 10 above) requires that the WTO agreements be interpreted in light of customary rules of interpretation. For an in-depth analysis of the issue, see G. Marceau, 'A Call for Coherence in International Law: Praises for the Prohibition Against "Clinical Isolation" in WTO Dispute Settlement', 33:5 *Journal of World Trade* (October 1999), 87–152.

⁷¹ WTO AB 16 April 1996, *United States – Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R (AB-1996-1).

⁷² *Ibid.*, at 19.

agreements in accordance with customary rules of interpretation of public international law. However, the relationship of the WTO Agreements to customary international law is broader than this. Customary international law applies generally to the economic relations between the WTO Members. Such international law applies to the extent that the WTO treaty agreements do not 'contract out' from it. To put it another way, to the extent there is no conflict or inconsistency, or an expression in a covered WTO agreement that implies differently, we are of the view that the customary rules of international law apply to the WTO treaties and to the process of treaty formation under the WTO.⁷³

The applicability of the Biosafety Protocol to a dispute already at the WTO cannot be excluded.⁷⁴ In this regard, the International Court of Justice, in the Advisory Opinion on the Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt (1980) declared that:

a rule of international law, whether customary or conventional, does not operate in a vacuum; it operates in relation to facts and in the context of a wider framework of legal rules of which it forms only a part.⁷⁵

From a procedural point of view, Article 13(1) of the Dispute Settlement Understanding (DSU) could confer a right of 'representation' on the Biosafety Protocol (or rather on its Secretariat) in a dispute between State members of the WTO. According to the terms of that provision, '[e]ach panel shall have the right to seek information and technical advice from any individual or body which it deems appropriate'.⁷⁶ In

⁷³ WTO 1 May 2000, *Korea – Measures Affecting Government Procurement*, WT/DS163/R, para. 7.96. This interpretation of the Panel is very close to that of Verzijl in *Georges Pinson (France) v. United Mexican States (19 October 1928)*, *Reports of International Arbitral Awards*, Vol. V, Decision 1, at 422, para. 50, according to which 'every international treaty must be considered to refer tacitly to common international law for all issues which the treaty does not itself resolve in express terms and in a different manner' (authors' translation).

⁷⁴ See 1996 *Report of the Committee on Trade and Environment* (WT/CTE/1, 12 November 1996), para. 179. The Committee on Trade and Environment recognizes 'the benefit of having all relevant expertise available to WTO panels in cases involving trade-related environmental measures, including trade measures taken pursuant to MEAs [Multilateral Environmental Agreements]. Article 13 and Appendix 4 of the DSU provide the means for a panel to seek information and technical advice from any individual or body which it deems appropriate and to consult experts, including by establishing expert review groups'.

⁷⁵ ICJ 20 December 1980, *Interpretation of the Agreement of 25 March 1951 between the WHO and Egypt*, [1980] ICJ Rep. 73, para. 10.

⁷⁶ See also DSU, Article 13(2), according to which 'panels may seek information from any relevant source and may consult experts to obtain their opinion on certain aspects of the matter'. Likewise, SPS Agreement, Article 11(2) states that '[i]n a dispute under this Agreement involving scientific or technical issues, a panel should seek advice from experts chosen by the panel in consultation with the parties to the dispute. To this end, the panel may, when it deems it appropriate, establish an advisory technical experts group, or consult the relevant international organizations, at the request of either party to the dispute or on its own initiative'.

assessing and interpreting the rules of other international instruments, panels can solicit the assistance of international organizations. The panel has, for example, had recourse to this procedure in the *United States – Section 110(5) of the US Copyright Act Case* by requesting legal information from the World Intellectual Property Organization (WIPO).⁷⁷

Moreover, from a case-law point of view, the Biosafety Protocol may be granted a privileged status in the resolution of a dispute within the WTO. In the appeal report in the *United States – Import Prohibition of Certain Shrimp and Shrimp Products Case*, the Appellate Body recognized that:

the protection and conservation of highly migratory species of sea turtles . . . demands concerted and cooperative efforts on the part of many countries whose waters are traversed in the course of recurrent sea turtle migrations. The need for and the appropriateness of such efforts have been recognized in the WTO itself as well as in a significant number of other international instruments and declarations . . . Of particular relevance is Principle 12 of the Rio Declaration on Environment and Development, which states, in part: 'Environmental measures addressing transboundary or global environmental problems should, as far as possible, be based on an international consensus.' Clearly, and as far as possible, a multilateral approach is strongly preferred.⁷⁸

One cannot deny that the Biosafety Protocol is truly the result of multilateral negotiations on a sensitive subject – that of GMOs. It is an instrument of consensus, and, moreover, an instrument preventing any

unilateralist approach in the field of environmental protection.⁷⁹

In order for the Biosafety Protocol to find application in the WTO, the concept of 'mutual supportiveness' should be promoted by the WTO dispute-settlement bodies. In this context, the Biosafety Protocol should be read as implying the principle of mutual supportiveness, in particular with the WTO agreements.⁸⁰ In order to maintain this mutual supportiveness, each framework should remain responsible and competent for the issues falling within its primary area of competence. The fact that the mentioned regimes should each focus on their primary competence does not mean, however, that the WTO agreements cannot deal with principles and rules that affect the Biosafety Protocol.⁸¹ More generally, there is an emerging and rather consistent practice in favour of mutual supportiveness in regulating the relationship between multilateral environmental agreements and WTO Agreements to be taken into account by the panels or the Appellate Body.⁸²

⁷⁷ WTO 27 July 2000, *United States – Section 110(5) of the US Copyright Act*, WT/DS160/R, para. 4.1. The response from WIPO was more factual than legal. Nevertheless, one main uncertainty appears in the submission of *amicus curiae* by international organizations. The uncertainty lies in the absence of an obligation for the WTO panels to ask for information from international organizations competent in the interpretation and enforcement of given instruments. This is what results from the *Argentina – Measures Affecting Imports of Footwear, Textiles, Apparel and other Items Case* in which the Appellate Body asserted that: '[j]ust as a panel has the discretion to determine how to seek expert advice, so also does a panel have the discretion to determine whether to seek information or expert advice at all. . . the Panel acted within the bounds of its discretionary authority under Articles 11 and 13 of the DSU in deciding not to seek information from, nor to consult with, the [International Monetary Fund (IMF)]. While it might perhaps have been useful for the Panel to have consulted with the IMF on the legal character of the relationship or arrangement between Argentina and the IMF in this case, we believe that the Panel did not abuse its discretion by not seeking information or an opinion from the IMF. For these reasons, we find that the Panel did not violate Article 11 of the DSU by not seeking information from, and consulting with, the IMF so as to obtain its opinion on specific aspects of the matter concerning the statistical tax imposed by Argentina'. See WTO AB 27 March 1998, *Argentina – Measures Affecting Imports of Footwear, Textiles, Apparel and other Items*, WT/DS56/AB/R (AB-1998-1), paras 84–86.

⁷⁸ WTO AB 22 October 2001, *United States – Import Prohibition of Certain Shrimp and Shrimp Products – Recourse to Article 21.5 of the DSU by Malaysia*, WT/DS58/AB/RW (AB-2001-4), para. 124.

⁷⁹ However, the Appellate Body has not, to date, taken a position on the effect and legal weight of a multilateral agreement relating to the protection of the environment, such as the Biosafety Protocol, in a dispute within the WTO. See E. Brown Weiss and J.H. Jackson, 'The Framework for Environment and Trade Disputes', in E. Brown Weiss and J.H. Jackson, n. 27 above, at 30–32; N. Bernasconi-Osterwalder, 'The Cartagena Protocol on Biosafety: A Multilateral Approach to Regulate GMOs', in *ibid.*, at 689–721. The Appellate Body urges Member States to negotiate in the area of environmental protection, but has remained silent on the impact of such environmental agreements when restrictive trade measures are taken to ensure compliance with these agreements.

⁸⁰ See L. Boisson de Chazournes and M.M. Mbengue, 'La Déclaration de Doha de la Conférence Ministérielle de l'Organisation mondiale du commerce et sa portée dans les relations commerce/environnement', 166:4 *Revue Générale de Droit International Public* (2002), 855–892. See also, *European Communities – Measures Affecting the Approval and Marketing of Biotech Products*, First Written Submission by the European Communities, n. 13 above, para. 459: 'The European Communities proceeds on the basis that there is no *a priori* inconsistency between the WTO agreements (*SPS Agreement, TBT Agreement, GATT 1994*) and the Protocol, that the two instruments are complementary, and that the Protocol's provisions on precaution and risk assessment inform the meaning and effect of the relevant provisions in the WTO agreements. The negotiators of the Biosafety Protocol were acutely aware of its relationship with WTO agreements and cannot have intended that there should be an inconsistency of approach. Reasonable governments have concluded that the authorization of GMOs (including import requirements) requires a particular approach, and they can hardly have intended that approach to be inconsistent with WTO rules. The European Community submits that the application of its internal measures is fully consistent with the WTO agreements, and that this is confirmed by the requirements of the Biosafety Protocol'.

⁸¹ See F.X. Perrez, 'The Cartagena Protocol on Biosafety and the Relationship Between the Multilateral Trading System and Multilateral Environmental Agreements', 10:4 *Swiss Review of International and European Law* (2000), 518–527.

⁸² Rotterdam Convention on the Prior Informed Consent Procedure, Hazardous Chemicals and Pesticides in International Trade (Rotterdam, 10 September 1998), Preamble: 'Recognizing that trade and environmental policies should be *mutually supportive* with a view to achieving sustainable development'; Stockholm Convention on Persistent Organic Pollutants (POPs) (Stockholm, 21 May 2001),

As Professor Cottier explains:

It is apparent that any legal finding on trade restrictions on GMOs that simply ignores the existence and operation of the [Biosafety] protocol will result in amplified criticism of what is often felt to be excessively intrusive WTO law and a predominance of the trade paradigm, and this will erode further the legitimacy of the trading system in the view of public opinion. In WTO adjudication and negotiations a doctrine is required that is able to bring about a reasonable connection between the two equally legitimate concerns and systems.⁸³

IS THE RISK ASSESSMENT PROCEDURE UNDER THE BIOSAFETY PROTOCOL A 'RELEVANT INTERNATIONAL STANDARD' FOR THE SPS AGREEMENT?

The WTO agreements invoked in the *EC Biotech* dispute, whether it be GATT 1994, the SPS or the TBT, are concerned – albeit to varying degrees – with risk assessment. But the SPS Agreement, above all, accords a preponderant weight to scientific evidence. In this context, the Biosafety Protocol could play an important role in risk assessment.⁸⁴ The Biosafety Protocol relies, in large measure, on assessment procedures and risk management. One need only refer to Articles 15 and 16, respectively, to be persuaded.⁸⁵ For their

part, in their interpretation of the SPS Agreement, and particularly Article 5(1), the WTO dispute-resolution bodies have contributed to the development of some aspects of risk assessment.⁸⁶

The legal criteria for risk assessment in the framework of the WTO closely follow the rules established by Annex III of the Biosafety Protocol on risk assessment. In *Australia – Measures Affecting the Importation of Salmon Case*, the Appellate Body considered that risk assessment must:

identify the diseases whose entry, establishment or spread a Member wants to prevent within its territory, as well as the potential biological and economic consequences associated with the entry, establishment or spread of these diseases; *evaluate the likelihood* of the entry, establishment and spread of these diseases, as well as the associated potential biological and economic consequences.⁸⁷ (emphasis added)

The Appellate Body specified that:

for a risk assessment to fall within the meaning of Article 5(1) and the first definition in paragraph 4 of Annex A, it is not sufficient that a risk assessment conclude that there is a *possibility* of entry, establishment or spread of diseases and associated biological and economic consequences. A proper risk assessment of this type must evaluate the 'likelihood', i.e., the 'probability', of entry, establishment or spread of diseases and associated biological and economic consequences . . .⁸⁸ (emphasis added)

The Biosafety Protocol also requires these two preliminary steps. According to paragraph 8(a) and (b) of Annex III relating to risk assessment, a risk assessment entails an 'identification of any novel genotypic and phenotypic characteristics associated with the living modified organism that may have adverse effects on biological diversity in the likely potential receiving environment, taking also into account risks to human health' and 'an evaluation of the likelihood of these adverse effects being realized, taking into account the level and kind of exposure of the likely potential receiving environment to the living modified organism'.

Preamble: 'Recognizing that this Convention and other international agreements in the field of trade and the environment are *mutually supportive*' (emphasis added). See Doha Declaration of the Ministerial Conference of the WTO (Doha, 14 November 2001, WT/MIN(01)/DEC/1), para. 31: 'With a view to enhancing the *mutual supportiveness* of trade and environment, we agree to negotiations, without prejudging their outcome, on: (i) the relationship between existing WTO rules and specific trade obligations set out in multilateral environmental agreements (MEAs). The negotiations shall be limited in scope to the applicability of such existing WTO rules as among parties to the MEA in question. The negotiations shall not prejudice the WTO rights of any Member that is not a party to the MEA in question' (emphasis added).

⁸³ T. Cottier, 'Implications for Trade Law and Policy: Towards Convergence and Integration', in C. Bail, R. Falkner and H. Marquard (eds), *The Cartagena Protocol on Biosafety: Reconciling Trade in Biotechnology with Environment and Development?* (Royal Institute of International Affairs, 2002), at 473.

⁸⁴ SPS Agreement, Article 5(1) reads: 'Members shall ensure that their sanitary or phytosanitary measures are based on an assessment, as appropriate to the circumstances, of the risks to human, animal or plant life or health, taking into account risk assessment techniques developed by the relevant international organizations' (emphasis added).

⁸⁵ According to the Biosafety Protocol, n. 18 above, Article 15, para. 1: 'Risk assessments undertaken . . . shall be carried out in a scientifically sound manner . . . and taking into account recognized risk assessment techniques. Such risk assessments shall be based, at a minimum, on information provided in accordance with Article 8 and other available scientific evidence in order to identify and evaluate the possible adverse effects of living modified organisms on

the conservation and sustainable use of biological diversity, taking also into account risks to human health'. See also *ibid.*, Article 16, para. 1 on risk management, according to which 'the Parties shall . . . establish and maintain appropriate mechanisms, measures and strategies to regulate, manage and control risks identified in the risk assessment provisions of this Protocol associated with the use, handling and transboundary movement of living modified organisms'.

⁸⁶ J. Pauwelyn, 'The WTO Agreement on Sanitary and Phytosanitary (SPS) Measures as Applied in the First SPS Disputes: *EC – Hormones, Australia – Salmon, Japan – Varietals*', 2:4 *Journal of International Economic Law* (December 1999), 641–665.

⁸⁷ See *Australia – Measures Affecting the Importation of Salmon*, n. 54 above, para. 121.

⁸⁸ *Ibid.*, para. 123.

The Biosafety Protocol provides other steps in the process of risk assessment. It seems that in case of a dispute concerning GMOs, the WTO dispute-settlement bodies could refer to these steps. Indeed, in the *Australia – Measures Affecting the Importation of Salmon Case*, the Appellate Body recalled that Article 5(1) of the SPS Agreement accepts that risk assessments take into account techniques of risk assessment developed by relevant international organizations.

At the same time, the Biosafety Protocol is not indifferent to rules of risk assessment determined and interpreted by WTO dispute-settlement bodies. According to paragraph 3 of Annex III of the Protocol, 'risk assessment should be carried out in a scientifically sound and transparent manner, and can take into account expert advice of, and guidelines developed by, relevant international organizations'. The WTO is not, strictly speaking, a specialized international organization in risk assessment. Nonetheless, an important meeting point between the Biosafety Protocol and WTO agreements could be the Codex Alimentarius.⁸⁹ Indeed, regarding food, the SPS Agreement invites States to conform to the assessment and standardization procedures of the Codex Alimentarius.⁹⁰ Moreover, no provision in the Biosafety Protocol opposes recourse to the assessment techniques of the Codex.⁹¹

The nature of the assessment may also serve as a link between the Biosafety Protocol and the WTO agreements. In its report in the *European Communities – Measures Concerning Meat and Meat Products (Hormones) Case*, the Appellate Body established that it is not necessary that a risk assessment establish a certain 'magnitude' or a certain 'threshold level of risk'.⁹² This reiterates the concept that risk assessment can be 'quantitative' as well as 'qualitative'.

The Appellate Body displayed some audacity when it deduced that:

⁸⁹ C. Noiville, 'Principe de précaution et Organisation mondiale du Commerce. Le cas du commerce alimentaire', 2 *Journal du Droit International* (2000), at 263.

⁹⁰ See SPS Agreement, Annex A, para. 3, which indicates that for food safety, 'the standards, guidelines and recommendations established by the Codex Alimentarius Commission relating to food additives, veterinary drug and pesticide residues, contaminants, methods of analysis and sampling, and codes and guidelines of hygienic practice' will be taken into account.

⁹¹ In this context, one should take into account Codex Alimentarius *Guidelines for the Conduct of Food Safety Assessment of Food Derived from Recombinant-DNA Plants* (Codex, July 2003). See also, Codex Alimentarius Commission, *Principles for the Risk Analysis of Foods Derived from Modern Biotechnology* (Codex, July 2003). These texts are contained in CAC Codex Alimentarius Commission, *Report of the Third Session of the Codex Ad Hoc Intergovernmental Task Force on Foods Derived from Biotechnology* (ALINORM 03/34, July 2003), available at <ftp://ftp.fao.org/codex/alnorm03/AI03_34e.pdf>.

⁹² See *Hormones Case*, n. 50 above, para. 186.

there is nothing to indicate that the listing of factors that may be taken into account in a risk assessment of Article 5(2) was intended to be a closed list. It is essential to bear in mind that the risk that is to be evaluated in a risk assessment under Article 5(1) is not only risk ascertainable in a science laboratory operating under strictly controlled conditions, but also risk in human societies as they actually exist, in other words, the actual potential for adverse effects on human health in the real world where people live and work and die.⁹³

In this way, the Appellate Body introduced some softness into the justification of measures taken in the name of protecting the environment and public health. The Appellate Body confirmed this position in the *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products Case*, concluding that a risk can be assessed from a quantitative or qualitative perspective.⁹⁴ It thus clarified the scope and content of Article XX(b) of GATT 1994 by stating that: '... as with the SPS Agreement, there is no requirement under Article XX(b) of the GATT 1994 to *quantify*, as such, the risk to human life or health' (emphasis added).⁹⁵

Thus, the Appellate Body indicated the willingness of WTO dispute-settlement bodies – indeed, to a reasonable and doubtless minimal degree – to take into account societal aspirations when it comes to risk management. Issues that do not lend themselves to quantitative analysis by means of laboratory methods of empirical or experimental research commonly associated with the physical sciences cannot be excluded from risk assessment.

The Biosafety Protocol could find an entry way into the WTO and play a key role in a dispute concerning risk assessment linked to GMOs. Indeed, according to Article 26, paragraph 1 of the Protocol:

the Parties, in reaching a decision on import . . . may take into account, consistent with their international obligations, socio-economic considerations arising from the impact of living modified organisms on the conservation and sustainable use of biological diversity, especially with regard to the value of biological diversity to indigenous and local communities.

The provisions of the Biosafety Protocol and the case law of the WTO dispute-settlement bodies relating to the SPS Agreement obey a common logic for risk assessment. Schematically, four key steps must be respected: the identification of a hazard;⁹⁶ its

⁹³ *Ibid.*, para. 187.

⁹⁴ See *Asbestos Case*, n. 32 above, para. 167.

⁹⁵ *Ibid.*, para. 167.

⁹⁶ C. Noiville and N. de Sadeleer, 'La gestion des risques écologiques et sanitaires à l'épreuve des chiffres. Le droit entre enjeux scientifiques et politiques', 2 *Revue du Droit de l'Union Européenne* (2001), at 398. For these authors, the identification of hazard 'consists of bringing out into the open the effects of a biological, chemical or physical agent on human health or on the environment . . .' (authors' translation).

characterization;⁹⁷ evaluation/appraisal of exposure;⁹⁸ and the characterization of the risks.⁹⁹ However, the Biosafety Protocol aims to regulate more broadly than the SPS Agreement, in the sense that it contains provisions relating to risk management.¹⁰⁰ The WTO case law does not establish, in an absolute manner, the applicability of the SPS Agreement with regard to risk management.¹⁰¹ Each WTO Member State is free to determine the level of acceptable protection before proceeding to risk assessment.¹⁰²

GMOS, ISSUES OF PUBLIC INTEREST AND THE WTO DISPUTE-SETTLEMENT PROCEDURE

GMOs give rise to many societal and public interest issues on which international civil society wants itself to be heard. The WTO dispute-settlement system, however, is traditionally based on a certain degree of opacity due to the intergovernmental character of its procedures. Only States have *locus standi* in the WTO dispute-settlement procedure. The proceedings before the panels and the Appellate Body are not public. The media, representatives of non-government organizations (NGOs) and other interest groups are not permitted to attend. However, the Appellate Body has attenuated the intergovernmental nature of the dispute-resolution system by admitting submissions from *amici curiae*, that is to say, by enabling non-State actors to present

their factual and legal point of view on a dispute through written communications.¹⁰³

In the *United States – Import Prohibition of Certain Shrimp and Shrimp Products Case*, the Appellate Body considered that ‘the comprehensive nature of the authority of a panel to “seek” information and technical advice from “any individual or body” it may consider appropriate, or from “any relevant source”, should be underscored’.¹⁰⁴ Accordingly, it found that the Panel erred in its legal interpretation that to accept unsought information from non-governmental sources is incompatible with the provisions of the DSU.¹⁰⁵ The Appellate Body specified that:

a panel has the discretionary authority either to accept and consider or to reject information and advice submitted to it, *whether requested by a panel or not* . . . The amplitude of the authority vested in panels to shape the processes of fact-finding and legal interpretation makes clear that a panel will *not* be deluged, as it were, with non-requested material, *unless that panel allows itself to be so deluged*.¹⁰⁶ (emphasis added)

⁹⁷ The characterization of hazard ‘has as its goal the determination of the nature and severity of toxic effects for health or for the environment . . .’ (authors’ translation). *Ibid.*, at 398.

⁹⁸ The exposure assessment seeks to determine ‘how at-risk groups and different components of the environment will be exposed to the effects of the substance or agent’ (authors’ translation). *Ibid.*, at 399.

⁹⁹ The characterization of the risk ‘consists of determining . . . the probability of the frequency and the gravity of the known or potential nefarious effects of the agent or the substance on the environment or health’ (authors’ translation). *Ibid.*, at 399.

¹⁰⁰ Risk management can extend to the adoption of legislative or regulatory measures concerning the risk in question and refers even more fundamentally to the determination, on the basis of assessment results, of an acceptable level of risk (authors’ translation). *Ibid.*, at 405–416.

¹⁰¹ We could, however, consider that the SPS Agreement, Article 5(3) deals with risk management. That Article reads as follows: ‘In assessing the risk to animal or plant life or health and determining the measure to be applied for achieving the appropriate level of sanitary or phytosanitary protection from such risk, Members shall take into account as relevant economic factors: the potential damage in terms of loss of production or sales in the event of the entry, establishment or spread of a pest or disease; the costs of control or eradication in the territory of the importing Member; and the relative cost-effectiveness of alternative approaches to limiting risks’.

¹⁰² D.K. Tarullo, ‘WTO Obligations and Other International Arrangements’, in M. Bronckers and R. Quick (eds), *New Directions in International Economic Law: Essays in Honour of John H. Jackson* (Kluwer Law International, 2000), at 164.

¹⁰³ See L. Boisson de Chazournes and M.M. Mbengue, ‘The *Amici Curiae* and the WTO Dispute Settlement System: The Doors Are Open’, 2:2 *The Law and Practice of International Courts and Tribunals* (2003), 205–248. See also B. Stern, ‘L’intervention des tiers – essentiellement les personnes privées mais aussi les Etats – dans le contentieux de l’OMC’, 107:2 *Revue Générale de Droit International Public* (2003), 219–264.

¹⁰⁴ See *Shrimp Turtle Case*, n. 38 above, para. 104.

¹⁰⁵ *Ibid.*, para. 110. In that case, the Panel was solicited by three NGOs: the Centre for Marine Conservation, the Centre for International Environmental Law and the World Wide Fund for Nature. The Panel decided that it could not accept unsolicited information unless that information was integrated in the memorials of one of the parties.

¹⁰⁶ *Ibid.*, para. 108. This interpretation of the DSU raised criticism and controversies within the WTO. During the meeting on the adoption of the Appellate Body and the panel reports in WTO 7 July 2000, *United States – Imposition of Countervailing Duties on Certain Hot-Rolled Lead and Bismuth Carbon Steel Products Originating in the United Kingdom*, WT/DSB/M/83, para. 12, Canada’s representative, for instance, questioned ‘whether the general authority under Article 17.9 of the DSU to draw up working procedures provided a sufficient legal basis for the Appellate Body to accept and consider *amicus curiae* briefs . . . the Appellate Body had provided no guidance as to when, in future cases, it would be prepared to accept and consider *amicus curiae* briefs . . . by explicitly recognizing that it had to act consistently with the DSU provisions, the Appellate Body seemed to have precluded its consideration of *amicus curiae* briefs that contained new facts, or that sought to re-argue issues of facts already decided by the Panel. To do otherwise would contravene Article 17.6 of the DSU, which limited the jurisdiction of the Appellate Body to issues of law . . . the Appellate Body’s reasons did not specifically address whether it could consider factual information contained in an *amicus curiae* submission. The Appellate Body’s decision on this critical issue was more than a matter of procedure. It highlighted the need for Members to decide and clarify, in the DSU rules, whether *amicus curiae* briefs should be permitted and, if so, under what conditions . . . the issue of *amicus curiae* briefs raised many complex and controversial issues which could not be resolved at the present meeting. Those issues were of systemic concern and, as such, should only be addressed by Members’. For more details, see L. Boisson de Chazournes and M.M. Mbengue, n. 103 above, 225–226.

The acceptance of communications from NGOs in the framework of dispute settlement has significance for disputes relating to environmental issues, including GMOs.¹⁰⁷ Indeed, panels and the Appellate Body could thus benefit from more information on risks linked to GMOs. These communications would also contribute to the strengthening of elements of evidence on which they base themselves to render their decisions.¹⁰⁸

A number of *amici curiae* memorials were submitted for the *EC Biotech* dispute.¹⁰⁹ There is reason to hope that the dispute-settlement bodies will duly take account of these in their reports. Even better would be for these bodies to provide 'traceability' by specifying factual and legal elements that they used or which inspired them in their decisions. This concern flows from the fact that WTO dispute-settlement bodies frequently content themselves with evasive references to *amicus curiae* briefs without determining, in any precise manner, how these are useful or not to settle a given dispute. GMOs pose real problems of public interest. It is in the name of public interest that more and more dispute resolution *fora* usually known for the confidentiality of their proceedings (e.g. the International Centre for the Settlement of Investment Disputes and under the North American Free Trade Agreement) are increasingly opening themselves to

civil society.¹¹⁰ The WTO dispute-settlement bodies should not allow themselves to be left behind and should, in this context, give more weight to communications from non-State actors. This perspective will contribute to increase public support for their decisions.

CONCLUSION

The questions regarding the international trade of GMOs and related disputes are complex because of their multifaceted character and because of their public interest nature. GMO issues cover various areas of regulation such as trade, environment, health, development or human rights. They involve multiple actors, including States, international organizations, NGOs, the private sector, the scientific community and individuals.

In this context, is the WTO dispute-settlement mechanism the most suited forum for deciding such complex issues? Doubts have been expressed about any *a priori* determination by the WTO of the forum under which a dispute involving WTO rights and obligations should be handled. Some stress the importance of WTO members maintaining their right to submit any conflict involving trade measures to WTO dispute settlement. Thus, they are of the view that the WTO remains authoritative to deal with a conflict arising from the use of any trade measure independently of its policy objective, even if it is environmental or sanitary.¹¹¹

One should remember that in its first report, the Committee on Trade and Environment (CTE) addressed the question of the choice of the dispute-settlement forum. It distinguished between disputes in which the WTO members involved are parties to an MEA and disputes in which some WTO Members are not party to an MEA. For the first category of disputes, the CTE recognized that:

WTO Members have not resorted to WTO dispute settlement with a view to undermining the obligations they accepted by becoming Parties to an MEA, and the CTE considers that this will remain the case. While WTO Members have the right to bring disputes to the WTO dispute settlement mechanism, if a dispute arises between WTO Members, Parties to an MEA, over the use of trade measures they are applying between themselves pursuant to the MEA, they should consider trying to resolve it through the dispute settlement mechanisms available under the MEA.¹¹²

¹⁰⁷ See Rio Declaration on Environment and Development (Rio de Janeiro, 1992) (UN Doc. A/CONF.151/26/Rev. 1), Vol. I, Principle 10: 'Environmental issues are best handled with participation of all concerned citizens, at the relevant level . . . States shall facilitate and encourage public awareness and participation by making information widely available. . . .'

¹⁰⁸ In the *United States – Imposition of Countervailing Duties on Certain Hot-Rolled Lead and Bismuth Carbon Steel Products Originating in the United Kingdom Case*, the Appellate Body affirmed that it enjoys a power similar to that of the Panel (WTO AB 10 May 2000, *United States – Imposition of Countervailing Duties on Certain Hot-Rolled Lead and Bismuth Carbon Steel Products Originating in the United Kingdom*, WT/DS138/AB/R (AB-2000-1), para. 42). See G. Marceau and M. Stilwell, 'Practical Suggestions for *Amicus Curiae* Briefs Before WTO Adjudicating Bodies', 4:1 *Journal of International Economic Law* (March 2001), 155–187.

¹⁰⁹ *Amicus curiae* submission by GeneWatch UK, Foundation for International Environmental Law and Development (FIELD), Five Year Freeze, Royal Society for the Protection of Birds (RSPB), The Center for Food Safety, Council of Canadians, Polaris Institute, Grupo de Reflexión Rural Argentina, Center for Human Rights and the Environment (CEDHA), Gene Campaign, Forum for Biotechnology and Food Security, Fundación Sociedades Sustentables, Greenpeace International, Californians for GE-Free Agriculture, and International Forum on Globalization (together referred as the 'Amicus Coalition') (27 May 2004), available at <<http://www.genewatch.org/WTO/Amicus/PublicInterestAmicus.pdf>>; *amicus curiae* brief submitted by a trans-Atlantic group of expert academics to the biotech dispute (27 May 2004), available at <<http://www.trade-environment.org/page/theme/tewto/biotechcase.htm>>; *amicus curiae* brief submitted by Center for International Environmental Law (CIEL), Friends of the Earth – United States (FOE – US), Defenders of Wildlife, Institute for Agriculture and Trade Policy (IATP), Organic Consumers Association – United States (OCA–USA) (1 June 2004), available at <http://www.ciel.org/Publications/ECBiotech_AmicusBrief_2June04.pdf>.

¹¹⁰ See *Methanex v. United States of America*, NAFTA/UNCITRAL Arbitration Rules Proceedings, Decision of the Tribunal on the Procedures for Non-Disputing Party Participation (30 January 2004), available at <<http://www.worldbank.org/icsid/methanex.htm>>.

¹¹¹ See *1996 Report of the Committee on Trade and Environment*, n. 74 above, para. 36.

¹¹² *Ibid.*, para. 178.

In the case of a dispute related to GMOs, this would lead us to consider that, if the WTO members are parties to the Cartagena Protocol, the best solution would be to bring the dispute under the procedures provided for by the Cartagena Protocol.

However, when the dispute involves non-parties to an MEA as in the *EC Biotech* dispute – the USA and Australia have not ratified the Cartagena Protocol – then the CTE advocated an intermediary solution:

the WTO would provide the only available dispute settlement mechanism since the non-party would have no rights under, nor access to, the MEA dispute settlement mechanism. In such circumstances, it would be important for the DSB to avoid becoming involved in pure environmental conflicts, *but a WTO dispute settlement panel could seek relevant environmental expertise and technical advice.*¹¹³ (emphasis added)

This last sentence may be very meaningful. It tends to suggest that the multifaceted character and the different interests involved in GMO disputes will more

likely be considered by the WTO dispute-settlement body if it finds solid linkages between trade, environment and health.

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¹¹³ *Ibid.*, para. 38.