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The Cartagena Protocol and the WTO: Will the EU Biotech Products Case Leave Room for the Protocol?

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THE CARTAGENA PROTOCOL AND THE WTO: WILL THE EU BIOTECH PRODUCTS CASE LEAVE ROOM FOR THE PROTOCOL?

Robyn A. Neff[*]

I. INTRODUCTION

On August 7, 2003, the United States requested that the Dispute Settlement Body of the World Trade Organization establish a panel to evaluate whether the European Union ("EU"), in imposing a moratorium on approving imports of biotechnology products, is in violation of the Agreement on the Application of Sanitary and Phytosanitary Measures ("SPS Agreement") of the World Trade Organization ("WTO").[1] The SPS Agreement allows WTO Member nations to impose restrictions to international trade necessary to protect human, animal or plant life or health with minimum negative effects on trade.[2]

On September 11, 2003, the Cartagena Protocol on Biosafety ("Cartagena Protocol" or "Protocol") to the 1992 United Nations

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1. World Trade Organization, Request for Establishment of a Panel by the United States, European Communities—Measures Affecting the Approval and Marketing of Biotech Products, WT/DS291/23 (Aug. 8, 2003) [hereinafter Biotech Products dispute]. The United States alleged that the EU moratorium violated the SPS Agreement, the General Agreement on Tariffs and Trade 1994, the Agreement on Agriculture and the Agreement on Technical Barriers to Trade. This Note will focus on the claims regarding the SPS Agreement.

Biotech products refer to products of agricultural biotechnology, i.e., living modified organisms.

2. Agreement on the Application of Sanitary and Phytosanitary Measures, Sept. 27, 1994, preamble para. 1, 4, *available at* http://www.wto.org/english/docs_e/legal_e/15sps_01_e.htm [hereinafter SPS Agreement].

Convention on Biological Diversity became international law.[3] The Protocol establishes a structure for the protection of biological diversity and human health from adverse effects of the international transfer and use of Living Modified Organisms ("LMOs").[4] The Protocol defines an LMO as "any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology."[5]

There is debate as to whether and how the Protocol conflicts with the SPS Agreement.[6] Potential conflicts include the extent of scientific evidence necessary to impose a trade restriction, the conditions under which Parties to the agreements may impose a restriction in the absence of scientific evidence, and the obligations of non-Parties engaging in international trade in LMOs. This Note examines the current dispute before the WTO Dispute Settlement Body regarding the EU moratorium on the importation of LMOs, and whether the WTO Panel will interpret the SPS Agreement compatibly with the Protocol in later disputes. Part II of this Note outlines key provisions of the Protocol and the SPS Agreement. Part III analyzes their potential for both procedural and substantive conflict. Part IV examines case law of the WTO Dispute Settlement Body treating the SPS Agreement. Part V applies the current Biotechnology Products dispute in examining whether the Cartagena Protocol can be effective in the context of the SPS Agreement and

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3. Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Jan. 29, 2000 , *available at* http://www.biodiv.org/biosafety/protocol.asp [hereinafter Protocol].

4. *Id.* at art. 1. The term "LMO" is essentially interchangeable with "GMO"—genetically modified organism. *See* Olivette Rivera-Torres, *The Biosafety Protocol and the WTO*, 26 B.C. INT'L & COMP. L. REV. 263, 270-71 (2003).

5. Protocol, *supra* note 3, at art. 3(g).

6. *See, e.g.*, Steve Charnovitz, *The Supervision of Health and Biosafety Regulation by World Trade Rules*, 13 TUL. ENVTL. L.J. 271 (2000); Rivera-Torres, *supra* note 4; Sabrina Safrin, *Treaties in Collision? The Biosafety Protocol and the World Trade Organization Agreements*, 96 AM. J. INT'L L. 606 (2002); Patrick J. Vallely, *Tension between the Cartagena Protocol and the WTO: the Significance of Recent WTO Developments in an Ongoing Debate*, 5 CHI. J. INT'L L. 369 (2004).

the implications for environmental protection in the regime of international trade in LMOs.

II. BACKGROUND

A. Cartagena Protocol on Biosafety: Key Provisions

1. Advance Informed Agreement Procedure

The advance informed agreement procedure ("AIA procedure") described in Articles 8 through 10 of the Cartagena Protocol provides the regulatory structure of the Protocol. The procedure first requires a Party exporting an LMO to notify the importing Party prior to the intentional transboundary movement of the LMO.[7] The exporting Party must include a biological description of the LMO, its characteristics as a result of genetic modification, its intended use, a risk assessment of its potential effects, and suggested methods for safe handling.[8] The importing Party must acknowledge receipt of notification in writing and undertake a risk assessment in deciding whether to permit the transboundary movement of the LMO.[9] The risk assessment shall be "scientifically sound" and based, at minimum, on "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."[10] The Protocol allows the importing party to account additionally for risks to human health.[11]

The AIA Procedure does not apply to LMOs intended for direct use as food, feed, or for processing.[12] Under Article 11 of the Protocol, Parties may restrict the import of LMOs of this type in accordance with a domestic regulatory framework that is "consistent with the objective of this Protocol."[13] All parties that make a final decision regarding the domestic use of an LMO, including placement on the market, must inform the other Parties through the Biosafety

7. Protocol, *supra* note 3, at art. 8.1.
8. *Id.* at annex I.
9. *Id.* at art. 9, 10, 15.
10. *Id.* at art. 15.1.
11. *Id.*
12. *Id.* at art. 11.
13. *Id.* at art. 11.4.

Clearing-House of its characteristics and suggested methods of handling and use, where appropriate.[14] The information reported to the Biosafety Clearing-House must contain a risk assessment pursuant to Annex III of the Protocol.[15] Article 11 explicitly addresses the needs of a Party that is a developing country or a Party with an economy in transition in the event that it lacks a domestic regulatory framework consistent with the objective of the Protocol.[16] It allows such a Party to declare through the Biosafety Clearing-House that it will make its decision as to the first import of an LMO for direct use as food or feed or for processing according to an Annex III risk assessment within a specified period of time.[17]

2. The Precautionary Principle

Despite the preference for decisions based on scientific principles, the Protocol allows an importing Party to deny access to LMOs of the exporting Party without scientific proof of the LMO's adverse effects on biodiversity or human health.[18] The purpose of this "precautionary principle" is to "avoid or minimize such potential adverse effects."[19] The precautionary principle might allow Parties that lack developed scientific infrastructure to respond to the perceived threat of introducing LMOs into their environment.

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14. *Id.* at art. 11.1, annex II. Article 20 of the Protocol establishes the Biosafety Clearing-House to facilitate the exchange of scientific and other information on LMOs and to assist Parties in implementing the Protocol.

15. *Id.* at annex II(j).

16. *Id.* at art. 11.6.

17. *Id.* at art. 11.6(a), 11.6(b). Article 11.9 entitles Parties in need of financial or technical assistance to cooperation from other Parties in meeting its obligations to the Protocol. *See id.* at art. 22, 28. This includes assistance with the use of risk assessments. *See, e.g., id.* at art 22.2.

18. *Id.* at art. 10.6.

19. *Id.*; *see also id.* at art. 11.8. Outside of the scope of the AIA Procedure, Article 11 contains a precautionary principle identical to art. 10.6, except in its application to LMOs intended for direct use as food or feed, or for processing.

3. Dispute Resolution

The Cartagena Protocol establishes the means for dispute resolution through two enabling provisions. Article 27 requires the Conference of the Parties[20] to, at its first meeting, adopt procedures for a regime of liability and redress for damage resulting from transboundary movement of LMOs, considering and elaborating on relevant international rules and procedures.[21] The Conference of the Parties shall endeavor to complete this task within four years.[22] During the negotiations of the Protocol, participants were unable to agree on the form of a liability regime and included Article 27 as a compromise to enable subsequent discussions on the issue.[23] The first meeting of the Conference of the Parties serving as the meeting of the Parties to the Protocol ("COP-MOP") took place in February 2004.[24] The meeting established an "Open-ended Ad Hoc Working Group of Legal and Technical Experts on Liability and Redress" to fulfill the Article 27 mandate.[25] The Ad Hoc Group will review information relating to liability and redress for damage from transboundary movement of LMOs, analyze potential or actual damage scenarios and the application of international rules for liability and redress, and elaborate options for rules and procedures on liability and redress.[26] The Ad Hoc Group is to report its activities to the COP-MOP and complete its work in 2007.[27]

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20. The Conference of the Parties to the Convention on Biological Diversity, serving as the meeting of the Parties to the Protocol [hereinafter COP-MOP], is the governing body of the Protocol.

21. Protocol, *supra* note 3, at art. 27.

22. *Id.*

23. Elizabeth Duall, *A Liability and Redress Regime for Genetically Modified Organisms under the Cartagena Protocol*, 36 GEO. WASH. INT'L L. REV. 173, 188 (2004).

24. *Id.* at 184.

25. Official Website of the Convention on Biological Diversity, United Nations Environment Programme, at http://www.biodiv.org/biosafety/issues/liability2.aspx (last visited May 18, 2005); *see* COP-MOP 1 Decision BS-I/8, at http://www.biodiv.org/decisions/default.aspx?m=MOP-01&id=8290&lg=0 (last visited May 18, 2005).

26. *Id.*

27. *Id.*

Article 34 of the Protocol addresses compliance with the terms of the Protocol; the Protocol requires the Conference of the Parties, at its first meeting, to negotiate and approve procedures and mechanisms to promote compliance with the Protocol and to respond to non-compliance.[29] Article 34 states that the compliance procedures shall be "separate from, and without prejudice to," the dispute settlement procedures established by the Convention on Biological Diversity.[30] At its first meeting, the COP-MOP adopted procedures and mechanisms on compliance and established a Compliance Committee to promote compliance, address non-compliance, and provide advice or assistance to Parties.[31] In instances of repeated non-compliance with the Protocol, the COP-MOP will "take appropriate action."[32] At its first meeting, the Compliance Committee intended to develop rules and procedures to

29. Protocol, *supra* note 3, at art. 34.

30. *Id.* Article 27 of the Convention on Biological Diversity provides for dispute settlement by negotiation concerning interpretation or application of the Convention. United Nations Conference on Environment and Development: Convention on Biological Diversity, June 5, 1992, para. 1, *available at* http://www.biodiv.org/convention/articles.asp [hereinafter CBD]. Parties can request third-party mediation if they cannot reach agreement by negotiation. *Id.* at para. 2. If a dispute is not resolved by either negotiation or mediation, Parties may agree to submit to arbitration or to the International Court of Justice. *Id.* at para. 3(a), 3(b). If Parties do not accept the means of dispute resolution under paragraph 3, the dispute will be submitted to conciliation. *Id.* at para. 4, annex II Part 2.

31. Official Website of the Convention on Biological Diversity, United Nations Environment Programme, http://www.biodiv.org/biosafety/issues/compliance2.aspx (last visited May 18, 2005); *see* COP-MOP 1 Decision BS-I/7, *available at* http://www.biodiv.org/decisions/ default.aspx?m=MOP-01&id=8289&lg=0.

32. COP-MOP 1 Decision BS-I/7, *available at* http://www.biodiv.org/ decisions/default.aspx?m=MOP01&id=8289&lg=0.

be approved by the COP-MOP.[33] At present, the mechanisms for dispute resolution under the Protocol are formative.

B. *WTO Sanitary and Phytosanitary Measures Agreement: Key Provisions*

1. Scientific Evidence Requirement

The SPS Agreement does not contain a counterpart to the AIA procedure of the Cartagena Protocol. The SPS Agreement allows WTO Members to restrict trade in LMOs as necessary to protect human, animal or plant life or health as consistent with the Agreement.[34] The SPS Agreement is presumed to be consistent with the provisions of GATT 1994,[35] which restricts Members' ability to erect barriers to international trade.[36] Affording importance to unrestricted trade, WTO Members, under the SPS Agreement, "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."[37]

The Agreement prohibits Members from imposing arbitrary or unjustifiably discriminatory measures on other Member states, where there exist similar conditions between those Members or in its own State.[38] This emphasizes the priority of unrestricted trade and the requirement that any restrictions based on sanitary or phytosanitary concerns—an exception deemed to be essential to human and environmental health—be based on scientific principles rather than unregulated trade discrimination.

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33. Official Website of the Convention on Biological Diversity, United Nations Environment Programme, http://www.biodiv.org/biosafety/issues/compliance2.aspx (last visited May 18, 2005).

34. SPS Agreement, *supra* note 2, at art. 2.1.

35. *Id.* at art. 3.2.

36. General Agreement on Tariffs and Trade, Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194 [hereinafter GATT].

37. SPS Agreement, *supra* note 2, at art. 2.2.

38. *Id.* at art. 2.3.

2. Precautionary Principle

The Agreement provides an exception when a Member lacks sufficient scientific evidence to restrict imports, but believes that protective barriers against imports are necessary. In such an instance, a Member may "provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information," and shall obtain more objective scientific information within a reasonable time.[39] The WTO Appellate Body has interpreted the failure to present scientific evidence as "'a strong indication that there are no such studies or reports.'"[40] The Appellate Body has held that a party must show "probability, not just possibility, of risk to the environment or human health."[41]

3. Dispute Resolution

The WTO Dispute Resolution system resolves disputes that arise out of the SPS Agreement. The SPS Agreement places dispute resolution within the framework of GATT and the Dispute Settlement Understanding,[42] which establishes a Dispute Settlement Body to administer the rules and procedures established for consultation and dispute settlement between WTO Members.[43] The United States brought its complaint against the EU before the WTO Dispute Settlement Body. The Dispute Settlement Body adjudicates many disputes concerning WTO law, but the SPS provision reserves the right of WTO Members to resort to other methods of dispute

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39. *Id.* at art. 5.7.

40. DAVID PALMETER & PETROS C. MALVROIDIS, DISPUTE SETTLEMENT IN THE WORLD TRADE ORGANIZATION 150 (2d ed. 2004) (quoting World Trade Organization, Appellate Body Report, Japan—Measures Affecting Agricultural Products, WT/DS76/AB/R, para. 137 (Mar. 19, 1999)).

41. Vallely, *supra* note 6, at 372 (citing Joost Pauwelyn, *Applying SPS in WTO Disputes*, in David Robertson and Aynsley Kellow, eds, GLOBALIZATION AND THE ENVIRONMENT: RISK ASSESSMENT AND THE WTO 63, 66 (Edward Elgar 2001)).

42. SPS Agreement, *supra* note 2, at art. 11.1.

43. GATT, *supra* note 36, at annex 2; Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, http://www.wto.org/english/docs_e/legal_e/28-dsu.pdf.

resolution, including submission to other international bodies or mechanisms under other international agreements.[44]

III. POTENTIAL FOR CONFLICT

The pith of the SPS Agreement and the Protocol potentially abut one another, and the Agreements must be interpreted as to their applicability under international law. Procedural and substantive conflicts arise in light of potential trade schemes.

A. Procedural

1. Cartagena Protocol Savings Clause

Under the Vienna Convention on the Law of Treaties, if two treaties on the same subject matter have incompatible provisions, the later treaty prevails for parties to both agreements.[45] The later treaty may provide that the earlier treaty prevails in such instances; such provisions are referred to as "savings clauses" because they maintain the applicability of the earlier treaty, whose provisions would otherwise be superseded by the incompatible provisions of the later treaty.[46]

The Cartagena Protocol, in force almost a decade after the SPS Agreement, twice refers to Parties' existing obligations under international law. Its preamble emphasizes that it "shall not be interpreted as implying a change in the rights and obligations of a Party under any existing international agreements."[47] The body of the Protocol again emphasizes Parties' rights and obligations under international law, stating that it does not restrict Parties' rights to take environmentally protective measures that surpass the requirements of the Protocol, provided that the measures comply with the Party's existing international obligations.[48] Thus, if

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44. SPS Agreement, *supra* note 2, at art. 11.3.

45. United Nations Vienna Convention on the Law of Treaties, U.N. Doc. A/CONF. 39/27, art. 30 (Jan. 27, 1980) [hereinafter Vienna Convention].

46. Safrin, *supra* note 6, at 613.

47. Protocol, *supra* note 3, preamble para. 10.

48. *Id.* at art. 2.4.

provisions of the Protocol are interpreted to conflict with provisions of the SPS Agreement, the SPS Agreement governs a dispute under such a provision. This holds true for parties to both agreements and for parties only to the SPS Agreement.

To effectively examine the potential outcomes of LMO disputes, one must analyze whether the agreements in fact conflict. The Convention on Biological Diversity, the parent to the Protocol, contains its own savings clause, separate from that in the Protocol.[49] The savings clause contains an exception under which its provisions will apply despite existing international agreement: "[t]he provisions of this Convention shall not affect the rights and obligations of any Contracting Party deriving from any existing international agreement, *except where the exercise of those rights and obligations would cause a serious damage or threat to biological diversity*."[50] Depending on the damage or threat of LMOs to biodiversity, the Cartagena Protocol, as part of the Convention on Biological Diversity, might take precedence over existing trade agreements.[51] Numerous risks of LMOs to the environment and health remain untested and uncertain, and it may be impossible to conduct a meaningful risk assessment.[52] Based on the myriad risks that may constitute at least a threat to biodiversity, the provisions of the Convention on Biological Diversity and the Cartagena Protocol could prevail under this clause of the Convention.

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49. CBD, *supra* note 30, at art. 22.

50. *Id.* (emphasis added).

51. *See* Gretchen L. Gaston & Randall S. Abate, *The Biosafety Protocol and the World Trade Organization: Can the Two Coexist?*, 12 PACE INT'L L. REV. 107, 118 (2000).

52. *Id.* at 119. For a detailed discussion of the potential benefits and risks of LMOs, *see* Simonetta Zarrilli, *International Trade in Genetically Modified Organisms and Multilateral Negotiations: a New Dilemma for Developing Countries*, in ENVIRONMENT, HUMAN RIGHTS AND INTERNATIONAL TRADE 40, 41-5 (Frencesco Francioni, ed., 2001); Mystery Bridgers, *Genetically Modified Organisms and the Precautionary Principle: How the GMO Dispute Before the World Trade Organization Could Decide the Fate of International GMO Regulation*, 22 TEMP. ENVTL. L. & TECH. J. 171, 173-75 (2004).

Additionally, GATT carves out exceptions for limitations on trade. In its preamble, the SPS Agreement[53] refers to GATT 1994 Article XX.1(b), which states that nothing in GATT shall be construed to prevent any Member from adopting measures necessary to protect human, animal or plant life or health, subject to the prohibition on arbitrary or discriminatory trade restrictions between Member countries where similar conditions exist.[54] The SPS Agreement elaborates rules for applying GATT provisions relating to the use of sanitary and phytosanitary measures, particularly Article XX(b).[55] The SPS Agreement's express implication of the GATT exceptions to unrestricted trade indicates the significance of measures protecting health and the environment, and that they should not be subordinate to those of unrestricted international trade.

2. Trade Between Non-Parties

The Cartagena Protocol contemplates LMO trade between Parties and non-Parties; it permits Parties to enter into bilateral, regional and multilateral agreements with non-Parties.[56] All transboundary movements of LMOs between Parties and non-Parties must be consistent with the objective of the Protocol.[57] Parties are to encourage non-Parties to submit information of their activities with LMOs to the Biosafety Clearing-House.[58] Because the United States is not a signatory to the Convention on Biological Diversity, it is not a Party to the Cartagena Protocol. However, the United States was active in the Protocol negotiations, calling for a savings clause to protect Parties' rights and obligations under existing international agreements—specifically WTO Agreements, which favor unrestricted trade.[59] The EU advocated that the Cartagena Protocol should take precedence over international trade agreements,

53. SPS Agreement, *supra* note 2, preamble para. 8.
54. GATT, *supra* note 36, at art. XX(b).
55. SPS Agreement, *supra* note 2, preamble para. 8.
56. Protocol, *supra* note 3, at art 24.1.
57. *Id.*
58. *Id.* at art. 24.2.
59. *See, e.g.*, Duall, *supra* note 23, at 178-79; Gaston & Abate, *supra* note 51, at 121; Safrin, *supra* note 6, at 614-15.

emphasizing environmental concerns.[60] However, the success of the United States and aligned Parties in advocating a savings clause "illustrates that any [Multinational Environmental Agreement] having a negative economic impact on trade could be challenged by those countries negatively affected, especially the United States, under the auspices of the WTO."[61]

B. Substantive

1. Scientific Evidence Requirement and Precautionary Principles

The Protocol and the SPS Agreement detail risk assessment procedures under which countries may restrict imports. Under the Protocol, a Party must comply with the risk assessment procedures in making its AIA decision,[62] which shall be undertaken in a "scientifically sound manner."[63] The risk assessment shall consider the novel characteristics of the LMO that may adversely affect biodiversity in the recipient environment, the likelihood of such effects occurring, and the projected consequences.[64] Additionally, an importing Party may consider risks to human health.[65]

The deference that an importing Party accords risks to human health influences the scope of the Cartagena Protocol and protective measures Parties may take in accordance with it. Article 4 of the Protocol defines its scope—the Protocol shall apply to the "transboundary movement, transit, handling and use of all living modified organisms that may have adverse effects on the conservation and sustainable use of biological diversity, *taking also into account risks to human health.*"[66] Alternative interpretations of this phrase, and its inclusion of the word "also," serve to both limit and broaden the scope of the Protocol.

The Protocol refers to risks to human health similarly throughout the Protocol,[67] once mentioning it independently.[68] On one hand, the

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60. Duall, *supra* note 23, at 179-80.

61. Gaston & Abate, *supra* note 51, at 123.

62. Protocol, *supra* note 3, at art. 10.1.

63. *Id.* at art. 15.1.

64. *Id.* at annex III.

65. *Id.*

66. *Id.* at art. 4 (emphasis added).

67. *See, e.g., id.* preamble para. 5; *id.* at art. 1, 4, 10.6, 15.1; *id.* at annex III.1.

word "also" can indicate that risks to human health are secondary to concerns of diminishing biodiversity. Under this interpretation, the Protocol can be read to exclude from its scope products that do not pose a direct risk to biodiversity even if they pose a risk to human health.[69] On the other hand, "also" does not necessarily indicate that risks to human health are of inferior consideration; it merely indicates an additional factor in environmental impact. The independent reference to risks to human health in Article 2.5 supports this view.[70] Under this view, the Protocol does not necessarily exclude products from its scope the risks of which are based heavily on human health. A third view suggested by one commentator interprets the provision as limiting its scope to LMOs that will be introduced into the environment, rather than for direct use as food or feed or for processing, and giving independent weight to considerations of human health.[71] This view is most consistent with the different treatment that the Protocol affords to LMOs introduced directly into the environment and those for direct use as food or feed or for processing,[72] although the Protocol does not explicitly accord greater importance to LMOs for one purpose over the other. This interpretation would allow consideration of health from LMOs introduced into the environment, but not from LMOs directly consumed. In the negotiation of the Protocol, most countries advocated that the phrase "taking also into account risks to human health" should encompass only "*indirect* human health impacts that could arise as a result of direct impacts on biodiversity."[73]

Depending upon which interpretation a Party implementing restrictive measures gives to the provision, it might enlarge the scope of permissible measures under the precautionary principle. For

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68. Protocol, *supra* note 3, at art. 2.5.

69. Rivera-Torres, *supra* note 4, at 274-75.

70. *See id.* at 274. In outlining the scope of the measures that Parties may take to protect biodiversity, Article 2.5 states: "The Parties are encouraged to take into account, as appropriate, available expertise, instruments and work undertaken in international forums with competence in the area of risks to human health."

71. *Id.* at 275.

72. *See* Protocol, *supra* note 3, at art. 8-10; *cf.* art. 11.

73. Rivera-Torres, *supra* note 4, at 275 (quoting *Aarti Gupta, Creating a Global Biosafety Regime*, 2 INT'L J. BIOTECH. 205, 211 (2000)).

example, under the first interpretation, in which risks to human health are secondary to concerns of effects on biodiversity, a Party would likely not be able to invoke the precautionary principle based solely on insufficient evidence regarding risks to human health. Under the second interpretation, in which environmental concerns and risks to human health are of tantamount importance, a Party could likely use a lack of sufficient information about risks to human health to invoke the precautionary principle. Under the third interpretation, favored by most negotiating countries to the Protocol,[74] a Party could invoke the precautionary principle in its decision to import only specific LMOs to be introduced directly into the environment that would effect biodiversity, but which might also affect human health. Although this interpretation narrows the scope of LMOs for which a Party can invoke the precautionary principle, it broadens the reasons for which a Party may invoke it. For example, a Party might have sufficient scientific information about the effects the LMO will have on biodiversity and the environment, but might lack scientific evidence as to the risks it poses to human health.

The precautionary principle of the Cartagena Protocol can be read to permit trade restrictions due to a wider range of reasons than its counterpart in the SPS Agreement. The Protocol allows precautionary measures in the event of scientific uncertainty due to insufficient scientific information regarding the *extent* of potential adverse effects that the LMO will have on biodiversity and human health.[75] This might permit a Party to invoke the precautionary principle upon citing *potential* impacts of already-defined risks. The SPS Agreement, on the other hand, allows Members to provisionally adopt precautionary measures based on relevant information, including that from international organizations or those adopted by other Members "where relevant scientific evidence is insufficient."[76] This language outlines the same standard of insufficient scientific information as the Protocol, but indicates international standards that Members may lawfully invoke, and intent to defer to them in the event of a dispute. One commentator notes that the Protocol's precautionary principle "gives much deference to environmental concerns of individual states."[77] Additionally, decisions of the WTO

74. *See supra* text accompanying note 72.
75. Protocol, *supra* note 3, at art. 10.6.
76. SPS Agreement, *supra* note 2, at art. 5.7.
77. Vallely, *supra* note 6, at 375.

dispute settlement body demonstrate a "general hostility by the WTO to environmental claims of ambiguous scientific validity."[78]

In contrast to the Cartagena Protocol, the SPS Agreement expressly allows WTO Members to restrict international trade by adopting measures "necessary to protect human, animal or plant life or health."[79] The same language in the body of the Agreement describes the obligations of Members under the Agreement;[80] the use of the word "necessary" circumscribes the scope of permissible restrictions on trade.[81] Interpreted with a focus on the word "necessary," a Member would have to justify its restrictions on trade under a strict level of scrutiny to show their necessity. However, sanitary and phytosanitary measures themselves are defined by the SPS Agreement without modification by the word "necessary;" the Agreement states only that a sanitary or phytosanitary measure is "[a]ny measure applied: to protect animal or plant life or health" under certain circumstances or "to prevent or limit other damage within the territory of the Member."[82] The provisions of the Agreement that govern the procedures by which Members may implement sanitary or phytosanitary measures use only those terms—sanitary and phytosanitary measures—without modification by the word "necessary."[83] Without this modification, the SPS Agreement can be interpreted more broadly to include restrictions that protect health and life, but that are not *necessary* to protect health and life. The Agreement defers to international norms in construing "necessary": "[s]anitary or phytosanitary measures which conform to international standards, guidelines or recommendations shall be deemed to be necessary to protect human, animal or plant life or health, and presumed to be consistent with the relevant provisions of this Agreement..."[84]

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78. *Id.*; *see, e.g., infra* Part IV.

79. SPS Agreement, *supra* note 2, preamble para. 1.

80. *Id.* at art. 2.1, 2.2.

81. *See id.* at art. 2.2: "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..." (emphasis added).

82. *Id.* at annex A(1)(a)-(d).

83. *See id.* at art. 5.

84. *Id.* at art. 3.2.

Elaboration of the meaning of "necessary" appears in the context of risk assessments. Members must base sanitary or phytosanitary measures 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."[85] Members shall ensure that measures "are not more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection."[86] A footnote to the provision clarifies that "a measure is not more trade-restrictive than required unless there is another measure, reasonably available taking into account technical and economic feasibility, that achieves the appropriate level of sanitary or phytosanitary protection and is significantly less restrictive to trade."[87] Although protections are limited in that they must not be more restrictive than "required," the footnote to the provision carves out a zone of permissibility in which the measure in question will not be considered more restrictive than required unless there is another reasonably available measure that could achieve the same protective end. Thus, if there is no reasonably available alternative, the sanitary or phytosanitary measure in question is presumptively not more restrictive than permitted by the Agreement. Interpreting the Agreement in this way broadens its protective scope beyond the Article 2 obligation of "necessity" to protect human, animal or plant life or health.

Because the character of restrictions permitted by the Cartagena Protocol and the SPS Agreement may each be interpreted broadly or narrowly, the zone of overlap between the two Agreements is difficult to define. On the one hand, the Cartagena Protocol may be read more broadly than the SPS Agreement: a Party may prohibit importation of an LMO due to lack of scientific certainty about its effects and might invoke the precautionary principle in a number of

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85. *Id.* at art. 5.1. "Relevant international organizations" include the Codex Alimentarius Commission (created in 1963 by the United Nations ("UN") Food and Agriculture Organization and the UN World Health Organization to develop food standards and guidelines), the International Office of Epizootics, and organizations operating within the framework of the Plant Protection Convention. *Id.* preamble, para. 6.

86. *Id.* at art. 5.6.

87. *Id.* at note 3.

scenarios.[88] On the other hand, the SPS Agreement may be interpreted as more broad: the international norms that serve as risk assessment guidelines come from a variety of sources, and because the Agreement does not circumscribe the sources,[89] a Member might adopt sanitary or phytosanitary measures more restrictive than the Cartagena Protocol's Annex III would allow, and find or interpret a relevant international norm in support.

Additionally, the permissible factors for consideration in a risk assessment are broader under the SPS Agreement than under the Cartagena Protocol; under the SPS Agreement, Members may take into account available scientific evidence and relevant economic factors.[90] The economic factors are confined to rectifying damage to production or sales in the event of the spread of disease, the costs of control or eradication, and the cost-effectiveness of alternative approaches to mitigating risks.[91] Because the Cartagena Protocol is an environmental agreement, it does not govern trade restrictions on LMOs imposed for economic reasons. The Protocol does allow Parties to account for, in a manner "consistent with their international obligations," socio-economic considerations that will arise from the "impact of living modified organisms on the conservation and sustainable use of biological diversity."[92] However, this provision confines itself to socio-economic considerations that arise from the impact of LMOs on biodiversity—not those that arise from direct impact on the market for certain products.

2. Dispute resolution

Problems may arise as to the forum for dispute resolution depending on whether the Agreements are interpreted as conflicting. This will not be a problem when parties to a dispute are not parties to

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88. *See supra* text accompanying note 73.

89. *See, e.g.*, SPS Agreement, *supra* note 2, preamble, para. 6 (using the word "including"), art. 3.2 (not specifying particular international standards).

90. *Id.* at art. 5.2, 5.3.

91. *Id.* at art. 5.3.

92. Protocol art 26.1. The provision adds that Parties should make such considerations "especially with regard to the value of biological diversity to indigenous and local communities."

the same Agreements. For example, the United States is not a Party to the Cartagena Protocol; the EU is a Party.[93] Both the United States and the EU are Members of the World Trade Organization.[94] A dispute will be settled in the forum for the Treaty under which it arises, which will be the Treaty to which both parties are bound.

If the parties to the dispute are Parties to both the SPS Agreement and the Cartagena Protocol, the complaining Party would choose the forum likely to favor its case. A Party alleging that another Party wrongfully maintains restrictive measures to trade, or that it refuses to import that Party's LMOs, would likely seek redress under the SPS Agreement, because the WTO disfavors discriminatory trade restrictions.[95] The Protocol might be invoked only as a defense, in which case the defending Party would have to argue that its rights under the Protocol supersede obligations under the SPS Agreement.[96] Because disputes under the Protocol would relate to transboundary trade, an action necessarily implicates the SPS Agreement; thus, any Party with a cause of action, i.e. alleging that another Party is overly restrictive, would choose the WTO Dispute Settlement forum. Although the measures for settling disputes under the Protocol are in development,[97] forum shopping would likely favor the WTO Dispute Settlement Body.

IV. WTO DISPUTE RESOLUTION AND THE SPS AGREEMENT: BACKGROUND FOR THE BIOTECHNOLOGY PRODUCTS DISPUTE

In May 2003, the United States submitted a request for consultation to the Dispute Settlement Body of the WTO, alleging that the EU's 1998 moratorium on the approval of biotechnology products for import or market violates provisions of the SPS

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93. 125 countries are Parties to the Cartagena Protocol. Official website of the Cartagena Protocol on Biosafety, http://www.biodiv.org/biosafety/ default.aspx (last visited Aug 3, 2005).

94. The WTO has 148 Members. Official website of the World Trade Organization, http://www.wto.org/english/thewto_e/whatis_e/ tif_e/org6_e.htm (last visited May 18, 2005).

95. *See* GATT, *supra* note 36, preamble, para. 3.

96. *See supra* Part III.A.

97. *See supra* Part II.A.3.

Agreement ("Biotech Products dispute").[98] The complaint frames the moratorium solely as a breach of international trade regulations. Because the United States is not a party to the Convention on Biological Diversity, it would not seek redress under the Cartagena regime. Moreover, because the United States brings action against a Member defending itself on environmental grounds, it has no reason to seek redress under the Cartagena regime—it would more wisely seek redress under a trade-friendly regime.

The Biotech Products dispute, because of the LMO subject matter, is the first WTO dispute that will implicate the Cartagena Protocol. However, the WTO panel has previously adjudicated disputes that implicate environmental concerns. In 1997, the Dispute Settlement Body held that the European Communities' import ban on meat from cattle treated with growth hormone ("Hormones dispute") violated its obligations under the SPS Agreement.[99] The European Communities invoked the precautionary principle[100] to justify the ban as protecting human health. Without ruling on whether the precautionary principle is part of customary international law,[101] the Appellate Body noted that the precautionary principle does not supersede a Member's obligation to undertake a proper risk assessment under Article 5.1 and 5.2.[102] The Appellate Body affirmed the decision of the Panel below, holding that the ban was not based on a scientific risk assessment.[103]

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98. World Trade Organization, Request for Consultations by the United States, European Communities—Measures Affecting the Approval and Marketing of Biotech Products, WT/DS291/1 (May 20, 2003). The complaint alleged violations of Articles 2.2, 2.3, 5.1, 5.2, 5.5, 5.6, 7 and 8, and Annex B(1), B(2), B(5), C(1)(a), C(1)(b) and C(1)(e) of the SPS Agreement.

99. World Trade Organization, Report of the Appellate Body, EC Measures Concerning Meat and Meat Procduts (Hormones), WT/DS26/AB/R, WT/DS48/AB/R, at para. 113, 114, 158(1) (Jan. 16, 1998) [hereinafter Appellate Body—Beef Hormones].

100. *See* SPS Agreement, *supra* note 2, at art. 3.3, 5.7.

101. *See* Appellate Body—Beef Hormones, *supra* note 99, at para. 123.

102. *Id.* at para. 125.

103. *Id.*; *see also* Safrin, *supra* note 6, at 616. The WTO Panel held that the EC's restrictions on the hormone exceeded the "international standards, guidelines or recommendations" on which

In 2003, the WTO Dispute Settlement Body again ruled in favor of the United States in holding that Japan, which had since 1994 imposed restrictions on the importation of United States apples ("Apples dispute"), violated provisions of the SPS Agreement.[104] Unlike the Beef Hormone dispute, in which the restrictive measure was for the protection of human health, Japan had implemented trade restrictions to protect the phytosanitary health of its apple crops and other agricultural products, which it argued were vulnerable to the North American "fire blight" bacterium.[105] The Appellate Body did not defer to Japan's risk assessment of importing United States apples, finding that the importation restrictions were "clearly disproportionate to the risk identified on the basis of the scientific

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the SPS Agreement Article 3.1 requires members to base their sanitary and phytosanitary measures. International standards, which determined five of the six disputed hormones to be safe, came from the Codex Alimentarius. Additionally, every country that examined the hormones found them to be safe. A Member taking restrictive measures not based on international standards may look to Article 3.3 of the SPS Agreement for justification. Article 3.3 permits a Member to introduce sanitary or phytosanitary measures that result in a higher level of protection than measures based on international standards would achieve "if there is a scientific justification," or if the Member determines that the level of protection is necessary after an Article 5 risk assessment. Scientific justification exists if after a risk assessment a member determines that international standards are not sufficient to achieve an appropriate level of sanitary or phytosanitary protection. For a detailed description of the case, see Kevin C. Kennedy, *Resolving International Sanitary and Phytosanitary Disputes in the WTO: Lessons and Future Directions*, 55 FOOD & DRUG L.J. 81 (2000); David G. Victor, *The Sanitary and Phytosanitary Agreement of the World Trade Organization: an Assessment After Five Years*, 32 N.Y.U. J. INT'L L. & POL. 865 (2000).

104. World Trade Organization, Report of the Panel, Japan—Measures Affecting the Importation of Apples, WT/DS245/R (July 15, 2003). The United States alleged violations of Articles 2.2, 2.3, 5.1, 5.2, 5.3, 5.6, 6.1, 6.2 and 7 and Annex B of the SPS Agreement.

105. *Id.*; *see also* Vallely, *supra* note 6, at 374.

evidence available."[106] The Appellate Body concluded that "Japan's phytosanitary measure at issue is maintained 'without sufficient scientific evidence' within the meaning of Article 2.2 of the SPS Agreement."[107]

Invoking Article 5.7 of the SPS Agreement as a defense to its violation of Article 2.2, Japan claimed that its phytosanitary import restriction was not maintained without sufficient scientific evidence under Article 2.2, or that alternatively, the measure was a "provisional" measure within the meaning of Article 5.7.[108] In response, the Appellate Body held that the measure was maintained where "the 'relevant scientific evidence' [about the risks of transmission of fire blight bacterium through apples] is not 'insufficient,'"[109] the necessary condition to invoke Article 5.7. It also held that Article 5.7 is not a defense to a violation of Article 2.2 in cases of "scientific uncertainty" as opposed to scientific insufficiency,[110] thereby prohibiting Japan from invoking the precautionary principle in its defense.

Would the cases have been decided differently if the products had been genetically modified and the Cartagena Protocol had been in force? Both the Beef Hormone dispute and the Apples dispute demonstrate the reluctance of the WTO Dispute Settlement Body to uphold a sanitary or phytosanitary measure based on the precautionary principle. A commentator on the Beef Hormones dispute suggests that the case would not have been decided differently.[111] The Appellate Body found that the ban was not based on a scientific risk assessment,[112] which is similarly required by the Protocol.[113] Additionally, the Appellate body held that the Article

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106. World Trade Organization, Report of the Appellate Body, Japan—Measures Affecting the Importation of Apples, WT/DS/245/AB/R para. 163 (Nov. 26, 2003) [hereinafter Appellate Body—Apples] (quoting World Trade Organization, Report of the Panel, Japan – Measures Affecting the Importation of Apples WT/DS245/R at para. 8, 198).

107. *Id.* at para. 168.

108. *Id.* at para. 171.

109. *Id.* at para. 182.

110. *Id.* at para. 184.

111. *See* Safrin, *supra* note 6, at 626.

112. *See supra* text accompanying note 102.

113. *See* Protocol, *supra* note 3, at art. 10.

5.7 precautionary principle does not supersede a Member's obligation under Articles 5.1 and 5.2.[114] In their requirements of scientific risk assessments, both the Protocol and the SPS Agreement reflect that "[p]recaution is not a substitute for science but is to be exercised as part of a science-based system."[115] The precautionary principles in both Agreements are triggered by insufficient relevant scientific evidence or information about the LMO,[116] but emphasize that restrictions imposed under such conditions should be bolstered by additional relevant information in a given or reasonable amount of time.[117]

For similar reasons, it is unlikely that the WTO Appellate Body would reach a different decision in the Apples dispute. The Appellate Body prohibited Japan from invoking the SPS Agreement, Article 5.7 in its defense,[118] upholding the Panel's finding that Japan maintained restrictive measures on trade without sufficient scientific evidence of risk, in violation of Article 2.2.[119] A risk assessment in compliance with the SPS Agreement "is not satisfied merely by a general discussion of the disease sought to be avoided by the imposition of a phytosanitary measure;"[120] it must "connect the possibility of adverse effects with an antecedent or cause."[121] Because the Cartagena Protocol requires a risk assessment "taking into account recognized risk assessment techniques,"[122] the Protocol would likely not have imposed procedurally different obligations on Japan in undertaking its risk assessment; the Appellate Body similarly would have been dissatisfied.

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114. *See* Appellate Body—Beef Hormones, *supra* note 99, at para. 125.

115. *See* Safrin, *supra* note 6, at 626.

116. *See* Protocol, *supra* note 3, at art. 10.6; *see also* SPS Agreement, *supra* note 2, at art. 5.7.

117. *See id.* at art. 10.3; *see also* SPS Agreement, *supra* note 2, at art. 5.7.

118. *See supra* text accompanying note 105.

119. Appellate Body—Apples, *supra* note 106, at para. 168.

120. *Id.* at para. 202.

121. *Id.*; *see* Vallely, *supra* note 6, at 374.

122. *See* Protocol, *supra* note 3, at art. 15.

V. U.S. COMPLAINT TO THE WTO AND IMPLICATIONS FOR THE CARTAGENA PROTOCOL

A. U.S. Complaint

The pending dispute between the United States and the EU came before the WTO Dispute Settlement Body in August 2003, but arose from activities beginning in 1998.[123] Following failed consultations between the United States and the EU, the United States requested that the Dispute Settlement Body establish a panel to adjudicate claims under various WTO Agreements, including the SPS Agreement.[124] The United States alleged that the EU moratorium on the approval of products of agricultural biotechnology for placement on the market violates WTO law and specifically restricts imports from the United States.[125] The Panel estimates that it will issue its final report to the Parties by the end of December 2005.[126]

B. Implication of the Cartagena Protocol

1. Overriding the Savings Clause

The Biotech Products dispute is the first case before the WTO Dispute Settlement Body to implicate the Cartagena Protocol. The dispute is governed by the SPS Agreement; the Protocol did not come into force until a month after the United States brought its complaint against the EU,[127] and the United States is not a party to the Protocol. However, speculation on how the Biotech Products

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123. *See* Biotech Products Dispute, *supra* note 1. Argentina and Canada have joined the United States in alleging EU violations of WTO Agreements.

124. *Id.*

125. *Id. See supra* note 98 for the alleged violations of the SPS Agreement.

126. World Trade Organization, Communication from the Chairman of the Panel, European Communities—Measures Affecting the Approval and Marketing of Biotech Products, WT/DS291/29 (Aug. 15, 2005).

127. The United States requested a WTO Dispute Settlement Body panel on August 7, 2003. The Cartagena Protocol entered into force on September 11, 2003.

dispute implicates the Protocol is a valuable assessment tool for examining future LMO disputes.

The Vienna Convention on the Law of Treaties specifies rules of governance for treaties relating to the same subject matter.[128] If one of two treaties in question specifies that it is subject to, or not to be considered incompatible with, the other treaty, the provisions of the other treaty prevail.[129] Arguably, the savings clause of the Cartagena Protocol specifies that its provisions do not supersede those of the SPS Agreement.[130] To bring a successful claim or defense under the Protocol, a Party must argue that it does not conflict with the SPS Agreement and, thus, the savings clause does not apply.

For example, one commentator argues that the SPS Agreement and the Cartagena Protocol can best be reconciled by interpreting them as "setting up two distinctly different procedures" for international trade regulation.[131] The Cartagena Protocol treats LMOs for direct use as food or feed, or for processing differently than LMOs not intended for such use, including those for direct introduction to the environment.[132] Because LMOs for use as food, feed, or for processing are not subject to the AIA procedure, trade restrictions must meet the requirements of the SPS Agreement.[133] "In effect, therefore, Article 11.8 [of the Cartagena Protocol] injects the precautionary principle into the SPS Agreement."[134] LMOs not for use as food, feed, or for processing are subject to the Protocol's AIA Procedure, and the Cartagena precautionary principle applies.[135] Such LMOs are not directly under the scope of the SPS Agreement.

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128. *See* Vienna Convention, *supra* note 45, at art. 30: "Application of successive treaties relating to the same subject-matter."

129. *Id.* at art. 30(2).

130. *See supra* Part III.A.1.

131. Thomas J. Schoenbaum, *International Trade in Living Modified Organisms*, ENVIRONMENT, HUMAN RIGHTS AND INTERNATIONAL TRADE 27, 34 (Francesco Francioni ed., 2001).

132. *Id.*; *see supra* note 12 and accompanying text.

133. *See* Schoenbaum, *supra* note 131, at 34.

134. *Id.* at 34 (emphasis omitted).

135. *Id.* at 35. For a discussion on the precautionary principles of each agreement and their compatibility see Part II.A.2. and Part II.B.2. *supra*.

Additionally, under treaties of the same subject matter, the more specific treaty governs in its niche, and the broader treaty governs the entire scope of the issue.[136] Multilateral Environmental Agreements are usually more subject-specific than trade agreements; in a trade agreement, the rules of the environmental agreement would likely govern.[137] The Cartagena Protocol deals specifically with LMOs, while the SPS Agreement treats measures erected against trade in general products that may affect health. The Protocol could thus be said to govern a dispute over LMOs.

If the Protocol and the SPS Agreement are not interpreted as treating the same subject matter, the SPS Agreement does not necessarily supersede the provisions of the Cartagena Protocol. A dispute of this nature would occur only if the parties to it were both Members of the WTO and Parties to the Protocol. Because the United States is not a Party to the Protocol, however, the Vienna Convention specifies that "the treaty to which both States are parties governs their mutual rights and obligations."[138] This reflects the integrity of "the contractual freedom of states according to which their latest expression of intent prevails."[139] This principle of international law applies to both treaty norms and other international norms, including customary international law.[140] This is significant in attempting to override the precautionary principle.

2. Precautionary Principle

The WTO Appellate Body rejected the defendants' invocation of the SPS Agreement's precautionary principle in both the Beef Hormones dispute and the Apples dispute.[141] This can be attributed in part to the pro-trade bias of the WTO.[142] One commentator has suggested that "the precautionary principle is not a viable defense in

136. *See* Gaston & Abate, *supra* note 51, at 120.

137. *Id.*

138. *See* Vienna Convention, *supra* note 45, at art 30(4)(b).

139. JOOST PAUWELYN, CONFLICT OF NORMS IN PUBLIC INTERNATIONAL LAW: HOW WTO LAW RELATES TO OTHER RULES OF INTERNATIONAL LAW, 362 (2003).

140. *Id.* at 363.

141. *See supra* Part IV.

142. *See* Kennedy, *supra* note 103, at 99.

a WTO dispute settlement proceeding."[143] In the Apples dispute, the Appellate Body was unsatisfied that there was "insufficient evidence" of the effects of the LMO necessary to stay a Member's obligations under Article 2.2 and to invoke the precautionary principle.[144] In the Beef Hormones dispute, the Appellate Body held that the EU's ban was not based on a proper risk assessment.[145] To successfully invoke the precautionary principle in the Biotech Products dispute, the EU must show that its moratorium on approving the importation and marketing of LMOs was based on a proper risk assessment as defined by the SPS Agreement.

Generally, the Member asserting a violation or defense of a WTO provision has the burden of proof in establishing that fact.[146] A Member asserting a violation must show that no relevant scientific reports to support a sanitary or phytosanitary measure exist.[147] The complaining Member may request the rationale for the protective measure, and the Member maintaining it must provide the relevant information.[148] Failure to present scientific reports would be "'a strong indication that there are no such studies or reports.'"[149] In the Apples dispute, the Appellate Body held that the initial burden of proof lay with the United States to establish a *prima facie* violation of Article 2.2 of the SPS Agreement, particularly that the protective measure imposed by Japan was "'maintained without sufficient scientific evidence.'"[150] Once the United States established a *prima*

143. *Id.* at 100.

144. Appellate Body—Apples, *supra* note 106.

145. Appellate Body—Beef Hormones, *supra* note 99.

146. PALMETER & MAVROIDIS, *supra* note 40, at 143. There are two exceptions under the SPS Agreement: Articles 4.1 and 6.3 place the burden of showing "equivalence" (that the sanitary or phytosanitary measures of an exporting Member meet the appropriate level of protection of an importing Member, even if the measures are different) and pest- or disease-free areas on the exporting Member. *Id.* at 149.

147. *Id.* at 150.

148. SPS Agreement, *supra* note 2, at art. 5.8.

149. PALMETER & MAVROIDIS, *supra* note 40, at 150 (quoting World Trade Organization, Appellate Body Report, Japan—Measures Affecting Agricultural Products, WT/DS76/AB/R, para. 137 (Mar. 19, 1999)).

150. Appellate Body—Apples, *supra* note 106, at para. 153.

facie violation, Japan had the burden of rebutting this claim, following the Appellate Body ruling in the Beef Hormones dispute[151]—specifically, that the measures were proper under the precautionary principle, i.e. maintained *with* sufficient scientific evidence.

One commentator suggests that the burden imposed on the party invoking the precautionary principle is directly adverse to the prospective burdens imposed by the Cartagena Protocol.[152] The precautionary principle of the Protocol[153] is deferential to the Party imposing the restriction on importation both in its text and by the heavy burden placed on the exporting country under the AIA Procedure to demonstrate the safety of LMO exports.[154] This conflict between the allocation of burdens between the SPS Agreement and the Protocol complicates reconciliation of the treaties and will weaken precautionary protections under the Cartagena Protocol.[155]

Although the WTO Appellate Body has not favored arguments under the precautionary principle, one commentator suggests that the precautionary principle is customary international law.[156] State practice consistently incorporates the precautionary principle into multilateral environmental agreements.[157] Recognized customary law is binding on countries that have not expressly objected to it.[158] If the WTO Appellate Body were to consider the precautionary principle customary international law, it might afford more deference to measures invoked under it than if it were not treated as an internationally recognized norm.

VI. Conclusion: Implications for Future LMO Disputes

World Trade Organization case law demonstrates reluctance to defer to defendants' invocation of the SPS Agreement's precautionary principle. In a WTO dispute in which both parties are

151. *Id.*
152. Vallely, *supra* note 6, at 376.
153. Protocol, *supra* note 3, at art. 10.6.
154. Vallely, *supra* note 6, at 376.
155. *Id.*
156. Bridgers, *supra* note 52, at 184.
157. *See id.* at 185-86.
158. *Id.* at 185.

Parties to the Cartagena Protocol, "[a] WTO panel must take into account also of other rules of international law, such as a defence under an MEA [(Multilateral Environmental Agreement)] or human rights treaty binding on both disputing parties."[159] If the Agreements are read to conflict, the Vienna Convention and the Cartagena Protocol savings clause will govern which Agreement applies.[160] If the Agreements are interpreted as compatible, the Cartagena Protocol will be most successful as a defense if the WTO Dispute Resolution Body incorporates the elements of the Protocol's precautionary principle as permissible considerations under the SPS Agreement precautionary principle and risk assessment procedures. If the WTO Panel gives clout to the EU protective measures under the SPS Agreement, provisions of the Cartagena Protocol can be given more deference under international law. Unless the Protocol is interpreted as such, WTO Members will seek the protection of the WTO Dispute Settlement forum, deferential to unrestricted trade, and the Cartagena Protocol will not attain authority as a protective environmental measure in trade disputes.

159. PAUWELYN, *supra* note 139, at 117.
160. *See supra* Part II.A.1.