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WTO and GMOs: Analyzing the European Community's Recent Regulations Covering the Labeling of Genetically Modified Organisms

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STUDENT NOTE

WTO AND GMOS: ANALYZING THE EUROPEAN COMMUNITY'S RECENT REGULATIONS COVERING THE LABELING OF GENETICALLY MODIFIED ORGANISMS

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I. INTRODUCTION

Few could argue that the past few decades witnessed increased attention given to the environment and its associated problems. From the publication of *Silent Spring*[1] in 1962, to the various international conferences addressing sustainable development, ozone depletion, and climate change, and to the large volume of media coverage surrounding environmental catastrophes including oil spills and nuclear accidents, public awareness of environmental problems assuredly is increasing.[2] This heightened awareness increases demands for solutions to these problems.[3] Initially, proposed solutions were primarily "end-of-pipe," dealing with the problems *after* pollution already occurred.[4] In contrast, recent years demonstrate a movement towards proactive measures, focusing on the source of the problem rather than providing reactive, expensive end-of-pipe solutions.[5]

Eco-labeling, or environmental labeling, provides one example of a proactive solution to environmental problems. Simply stated, eco-labels are, "seals placed on a product or package which identify those consumer products determined to be environmentally less harmful than other functionally and competitively similar products."[6] Generally, they attempt to promote environmentally safe behavior by using market mechanisms instead of outright government bans.[7]

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1. RACHEL CARSON, SILENT SPRING (1962). Many link the modern environmental movement with the publication of this book. *See* JOHN BRAITHWAITE & PETER DRAHOS, GLOBAL BUSINESS REGULATION 257 (2000); ROBERT GOTTLIEB, FORCING THE SPRING: THE TRANSFORMATION OF THE AMERICAN ENVIRONMENTAL MOVEMENT 81–86 (1993).

2. ORGANISATION FOR ECONOMIC CO-OPERATION AND DEVELOPMENT (OECD), ENVIRONMENTAL LABELLING IN OECD COUNTRIES 11 (1991) [hereinafter ENVIRONMENTAL LABELLING IN OECD COUNTRIES].

3. *Id.*

4. *Id.*; Surya P. Subedi, *Balancing International Trade with Environmental Protection: International Legal Aspects of Eco-Labelling*, 25 BROOK. J. INT'L L. 373, 373 (1999).

5. ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 11.

6. Jim Salzman, *The Trade Implications of Trends in Eco-Labeling*, *in* LIFE-CYCLE MANAGEMENT AND TRADE 41, 42 (OECD ed., 1994).

7. *See* ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 12–13; Thomas J. Schoenbaum, *International Trade and Protection of the Environment: The Continuing Search for Reconciliation*, 91 AM. J. INT'L L. 268, 294 (1997).

Despite appearing as a benign tool to protect the environment, the legality of eco-labels under the free trade regime of the World Trade Organization ("WTO") is questionable.[8] The debate centers on whether specific labeling regimes, such as those focused on the labeling of products produced with or containing genetically modified organisms ("GMOs"), act as either a *de jure* or *de facto* barrier to trade[9] in violation of the Agreement Establishing the World Trade Organization ("WTO Agreement").[10]

Around October 1998, the European Community ("EC") implemented a moratorium on approving products produced with or containing GMOs. Subsequently, on May 13, 2003, Argentina, Canada and the United States requested consultations with the EC under the dispute settlement provisions of the WTO.[11] These consultations proved fruitless, and on August 8, 2003, the three countries requested the establishment of a panel to evaluate the dispute and make recommendations to the WTO's Dispute Settlement Body ("DSB").[12] On October 18, 2003, the EC independently decided to publish new regulations governing the labeling and traceability of GMOs.[13] While the moratorium remains, there are indications that it will end, allowing the importation of GM

8. ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 33.

9. Elliot B. Staffin, *Trade Barrier or Trade Boon? A Critical Evaluation of Environmental Labeling and Its Role in the "Greening" of World Trade*, 21 COLUM. J. ENVTL. L. 205, 233 (1996).

10. Marrakesh Agreement Establishing the World Trade Organization, Apr. 15, 1994, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 1 (1994), 33 I.L.M. 1144 [hereinafter WTO Agreement].

11. European Communities—Measures Affecting the Approval and Marketing of Biotech Products, Request for Consultations by Argentina, May 21, 2003, WTO Doc. WT/DS293/1; European Communities—Measures Affecting the Approval and Marketing of Biotech Products, Request for Consultations by Canada, May 20, 2003, WTO Doc. WT/DS292/1; European Communities—Measures Affecting the Approval and Marketing of Biotech Products, Request for Consultations by the United States, May 20, 2003, WTO Doc. WT/DS291/1. All WTO documents are available via the WTO website, *at* http://www.wto.org/.

12. European Communities—Measures Affecting the Approval and Marketing of Biotech Products, Request for Establishment of a Panel by Argentina, Aug. 8, 2003, WTO Doc. WT/DS293/17; European Communities—Measures Affecting the Approval and Marketing of Biotech Products, Request for Establishment of a Panel by Canada, Aug. 8, 2003, WTO Doc. WT/DS292/17; European Communities—Measures Affecting the Approval and Marketing of Biotech Products, Request for Establishment of a Panel by the United States, Aug. 8, 2003, WTO Doc. WT/DS291/23 [hereinafter U.S. Panel Request];

13. Council and European Parliament Regulation (EC) 1829/2003 of 22 September 2003 on Genetically Modified Food and Feed, 2003 O.J. (L 268) 1 [hereinafter Food and Feed]; Council and European Parliament Regulation (EC) 1830/2003 of 22 September 2003 Concerning the Traceability and Labelling of Genetically Modified Organisms and the Traceability of Food and Feed Products Produced from Genetically Modified Organisms and Amending Directive 2001/18/EC, 2003 O.J. (L 268) 24 [hereinafter Traceability and Labelling].

foods.[14] If the EC lifts the moratorium and applies the strict requirements of the new regulations, then the dispute will probably continue, with the three complaining countries contesting the legality of the regulations under WTO trade rules.[15]

This Note explores the compatibility of the EC's GMO regulations within the framework of the Agreement on the Application of Sanitary and Phytosanitary Measures ("SPS Agreement"),[16] the Agreement on Technical Barriers to Trade ("TBT Agreement"),[17] and the General Agreement on Tariffs and Trade 1994 ("GATT 1994" or "GATT"),[18] all integral parts of the WTO Agreement. Part II presents arguments for or against the use of GM-products. Part III explores the concept of eco-labeling by analyzing the general goals of such programs, including the economic theory behind green consumerism and the characteristics necessary for effective schemes. Part IV describes the core objectives and features of the EC regulations. To provide a framework for analyzing the EC regulations under the WTO regime, Part V sorts eco-labeling schemes into different categories. Part VI examines the legality of the EC's regulations under the SPS Agreement, the TBT Agreement and GATT 1994. Finally, Part VII presents a proposal for a trade-sensitive regime. This Note illustrates that the EC regulations run afoul of several WTO provisions, but argues that it is possible to develop an eco-labeling program to assuage consumer concerns over GMOs without violating WTO Agreement and without the need to resort to a new watered-down treaty.

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14. John Mason, *EU May End GM Food Imports Delay*, FIN. TIMES, Nov. 5, 2003, at 11; Shelley Emling, *U.S. European Union toe-to-toe Over Trade Issues*, ATLANTA J. CONST., Nov. 2, 2003, at 1D.

15. It is important to clarify that the current WTO dispute focuses on the *de facto* moratorium and not the EC's regulatory framework for GMO-labeling, discussed in Part. IV, *infra*. This Note focuses on these labeling regulations as a source of continuing debate within the WTO over the regulation of GMOs.

16. Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, WTO Agreement, *supra* note 10, Annex 1A, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 27, at 69, 33 I.L.M. at 21893 [hereinafter SPS Agreement].

17. Agreement on Technical Barriers to Trade Apr. 15, 1994, WTO Agreement, *supra* note 10, Annex 1A, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 27, at 22051 [hereinafter TBT Agreement].

18. General Agreement on Tariffs and Trade 1994, Dec. 15, 1993, WTO Agreement, *supra* note 10, Annex 1A, LEGAL INSTRUMENTS—RESULTS OF THE URUGUAY ROUND vol. 1, 33 I.L.M. 29 (1994) [hereinafter GATT 1994]. GATT 1994 includes the provisions of the 1947 General Agreement on Tariffs and Trade, General Agreement on Tariff and Trade, Oct. 30, 1947, 61 Stat. A-11, T.I.A.S. 1700, 55 U.N.T.S. 194 [hereinafter GATT 1947], as well as various protocols, decisions, and understandings promulgated under the 1947 treaty.

II. GENETICALLY MODIFIED ORGANISMS: HELPFUL OR HARMFUL?

Disputes over government regulations, whether domestic or international, focus in part on the perceived effects of GMOs. Opponents of GMOs point to numerous threats that warrant containing or banning the use GMOs. The threshold concern is the uncertain effects following the genetic alteration of a living organism.[19] The potential harm associated with human consumption[20] and the unknown effects of introducing a foreign organism into a given ecosystem is immeasurable.[21] In addition to this scientific uncertainty are ethical and religious beliefs that question the morality of humans playing the role of God.[22]

On the other hand, proponents view GMOs as replete with economic, environmental, and health benefits. Economically, transferring favorable characteristics into crop seeds can increase per acre food production, providing food for a growing world population while reducing pesticide use.[23] Environmentally, GMOs may be able to fend of decreasing biodiversity by replenishing scarce resources.[24] Additionally, scientists can alter crops to improve the nutritional components of food.[25]

These potential benefits ensure the continued proliferation of GM products. Nonetheless, the potential negative effects of GMOs necessitate proactive measures to resolve any problems that arise. Such measures should provide consumers with the option of avoiding these risks by avoiding GMOs while comporting with international trade law.

III. GOALS OF ECO-LABELING: GREEN CONSUMERISM

A. *Theory Behind Eco-Labeling*

Economic laws of supply and demand provide the basis for green consumerism. Proponents of green consumerism argue that society can protect the environment by developing a market for environmentally safe

19. Darren Smits & Sean Zaboroski, *GMO's: Chumps of Champs of International Trade?*, 1 ASPER REV. INT'L BUS & TRADE L. 111, 114 (2001).

20. Charles W. Smitherman III, Comment, *World Trade Organization Adjudication of the European Union-United States Dispute Over the Moratorium on the Introduction of New Genetically Modified Foods to the European Common Market: A Hypothetical Opinion of the Dispute Panel*, 30 GA. J. INT'L & COMP. L. 475, 482 (2002).

21. Smits & Zaboroski, *supra* note 19, at 114 (noting that the introduction of GMOs has the potential to reduce biodiversity).

22. *Id.*; Smitherman, *supra* note 20, at 482.

23. *See* Smits & Zaboroski, *supra* note 19, at 114; Smitherman, *supra* note 20, at 480.

24. Smits & Zaboroski, *supra* note 19, at 113.

25. *Id.*; Smitherman, *supra* note 20, at 481.

products.[26] To this end, this Note assumes that advocates of labeling regimes that identify GM-products view GMOs as environmentally unsafe and that the presence of a label will cause an increase in demand for non-GM products with a corresponding decrease in demand for GM-products.[27] In effect, these proponents hope to establish a virtuous cycle that will raise consumer awareness and stimulate demand while increasing product sales for non-GMO producers.

The first step in this cycle, raising consumer awareness, includes informing customers "that their purchases do effect the environment, and that some products are worse for the environment than others."[28] Inherent in this is teaching consumers the cumulative effects of environmentally harmful practices.[29] Additionally, "[i]f consumers are not aware of the existence of the label or do not understand what it signifies, the program cannot achieve [its goals of stimulating demand and increasing sales.]"[30]

Specifically, eco-labels raise awareness by "inform[ing] the consumer about the effect of the product, or its process of production, on the environment."[31] Consumers need information on how a product harms the environment before, during, and after a product's useful life.[32] Thus, labels are "supposed to assist consumers [in] making informed purchases,"[33] by allowing them to compare similarly functional products, "provid[ing] . . . another basis of product choice beyond price, performance, and other attributes."[34]

Providing an enhanced level of information pushes the next step in the cycle by altering consumer behavior to "create demand pressures in favor of environmentally friendly products."[35] Once a consumer realizes the relative impact of a given product, he will hopefully purchase a less environmentally harmful product.[36] A derived use of the fuel economy guides regulated by the United States Environmental Protection Agency

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26. JULIAN MORRIS, GREEN GOODS? CONSUMERS, PRODUCT LABELS AND THE ENVIRONMENT 13–14 (1997).

27. This Note considers non-GM products to be "green," as compared with products produced from or containing GMOs.

28. ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 13.

29. *See id.*

30. Avi Gesser, Comment, *Canada's Environmental Choice Program: A Model for a "Trade-Friendly" Eco-Labeling Scheme*, 39 HARV. INT'L L.J. 501, 504 (1998).

31. Christian Tietje, *Voluntary Eco-Labeling Programmes and Questions of State Responsibility in the WTO/GATT Legal System*, J. WORLD TRADE, Oct. 1995, at 123, 126.

32. *See infra* Part. III.B for a discussion of the "cradle-to-grave" feature of eco-labels.

33. David Robertson, *GM Foods and Global Trade*, *in* GLOBALIZATION AND THE ENVIRONMENT 206, 215 (David Robertson & Aynsley Kellow eds., 2001).

34. ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 12.

35. Atsuko Okubo, *Environmental Labeling Programs and the GATT/WTO Regime*, 11 GEO. INT'L ENVTL. L. Rev 599, 601 (1999).

36. ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 12.

("EPA") and the United States Department of Energy ("DOE") provides a real-world example of this cycle.[37] A consumer looking to purchase a new car can compare relative fuel economy though the use of miles-per-gallon estimates, which dealerships display on showroom cars.[38] While a customer might decide to purchase a more fuel-efficient car out of long-term cost concerns, these labels arguably have the effect of encouraging the consumer to purchase a car that consumes relatively less fuel, a clear goal of environmentalists. Thus, there is *de facto* discrimination against less-efficient cars.

Increasing consumer demand in turn "provide[s] incentives for producers to produce environmentally friendly products to gain a larger market share."[39] These incentives act as the proverbial carrot,[40] since the presence of a label should increase the sales of these products.[41] Manufacturers seeking to apply for an eco-label that uses some form of life-cycle assessment will exert downward pressure on their suppliers.[42] It is likely that moral and ethical concerns will not drive manufacturers to produce green goods. Indeed, the potential competitive advantage gained by being able to affix an eco-label to their product often motivates manufacturers to apply for a label.[43]

If producers are able to capture the economic gains from a market for green goods, then they will seek to increase the size of the green market.[44] Green producers will intensify their advertising efforts while producing a larger variety of green products, including non-GM goods. Thus, producers will also seek to educate consumers, restarting the virtuous cycle.

While the positive effects of labeling are debatable, many recognize the usefulness of such programs. For example, trade and environment scholar Daniel C. Etsy argues that, "[l]abeling can . . . be a powerful tool for environmental policy advances."[45] Additionally, Agenda 21 and Principle 10 of the Rio Declaration on Environment and Development ("Rio Declaration"), both adopted at the United Nations Conference on

37. *See* U.S. DEPARTMENT OF ENERGY, OFFICE OF ENERGY EFFICIENCY AND RENEWABLE ENERGY & U.S. ENVIRONMENTAL PROTECTION AGENCY, FUEL ECONOMY GUIDE (2004), *available at* http://www.fueleconomy.gov/feg/FEG2004.pdf (last visited Dec. 13, 2003).

38. *Id.*

39. Okubo, *supra* note 35, at 601.

40. ARTHUR E. APPLETON, ENVIRONMENTAL LABELLING PROGRAMMES: INTERNATIONAL TRADE LAW IMPLICATIONS 13–14 (1997).

41. *See* Salzman, *supra* note 6, at 43; Tietje, *supra* note 31, at 126.

42. MORRIS, *supra* note 26, at 30.

43. *See* OECD, ECO-LABELLING: ACTUAL EFFECTS OF SELECTED PROGRAMMES 68 (OECD, Working Paper No. 44, vol. V, 1997) [hereinafter OECD, ECO-LABELLING].

44. ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 12.

45. Daniel C. Etsy, *Unpacking the "Trade and Environment" Conflict*, 25 LAW & POL'Y INT'L BUS. 1259, 1285 (1994).

Environment and Development, support the idea of eco-labeling.[46] However, "[t]he effectiveness of an eco-labeling scheme depends on its acceptance by both producers and consumers."[47] Raising awareness might cause consumers to respond by purchasing environmentally friendly products, but eco-labeling programs will fail if customers do not actually make the purchases and are not willing to pay the price premium that accompanies labeled products.[48] Indeed, there is often "a yawning gap between what consumers say in surveys about what they will buy and the actual sales data."[49] Despite these obstacles, properly implemented labeling programs, used in conjunction with other proactive measures, are viable ways of addressing consumer fears over GMOs.

Within the GMO debate, labeling divides the food market between products that contain GMOs and those that do not. If the informed consumer believes that GMOs lead to disastrous consequences, then the market will create incentives for producers of non-GM foods. However, GMOs may alter a product's characteristics to increase crop yield by preventing the onset of disease, mitigating the effects of a drought or making them pest-resistant.[50] Consequently, products that do not contain GMOs will cost more to produce and these non-GMO purchasers must be willing to pay a price premium.

B. *Criteria for Effective Eco-Labeling Schemes*

According to theory behind eco-labeling, any such program must possess certain attributes if it is to succeed. If eco-labels are to influence consumer behavior, they must contain reliable information, so customers can compare similar products over time.[51] Criteria that change frequently or multiple labeling programs might confuse consumers. Indeed, the

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46. *Agenda 21*, U.N. GAOR, 47th Sess., Annex 2, ¶ 4.21–22, UN Doc. A/CONF.151/4 (Part. I) (1992), *available at* http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21toc.htm (last visited Dec. 16, 2003) [hereinafter Agenda 21]; *Rio Declaration on Environment and Development*, U.N. GAOR, 27th Sess., Annex 1, Agenda Item 21, UN Doc. A/CONF.151/5/Rev.1 (1992) [hereinafter Rio Declaration]. Agenda 21 explicitly encourages governments to encourage the expansion of eco-labeling and also to generally assist the public in making environmentally informed choices. Agenda 21, *supra*, ¶¶ 4.21–22. Principle 10 of the Rio Declaration implicitly endorses eco-labeling by encouraging the dissemination of information to the public. Rio Declaration, *supra*, princ. 10. Despite the many countries that signed onto both Agenda 21 and the Rio Declaration, they remain non-binding. *See generally* APPLETON, *supra* note 40, at 64–66.

47. APPLETON, *supra* note 40, at 16.

48. *See id.*

49. Amy Cortese, *They Care About the World (and They Shop, Too)*, N.Y. TIMES, July 20, 2003, § 1, at 4.

50. *See supra* notes 23–25 and accompanying text.

51. *See* Staffin, *supra* note 9, at 215; Okubo, *supra* note 35, at 604.

OECD attributes the moderate success of labeling to the "proliferation of all types of environmental labels on products[, creating] confusion among consumers."[52] As a result, there is a need for recognizable labels,[53] as customers cannot complete a green purchase if they are unable to distinguish between environmentally sound products and environmentally harmful products.

Additionally, eco-labels must contain accurate, verifiable information.[54] Without this, consumers will likely remain skeptical of labeled products. Maintaining customer confidence requires the avoidance of self-serving statements by manufacturers in favor of independently administered programs.[55] The WTO's Committee on Trade and the Environment ("CTE") recognizes that labeling schemes "should be designed so as to ensure that they provide sufficient and accurate information to consumers regarding the relative environmental impacts of competing products."[56] According to the CTE, accurate information requires "truthfulness, scientific basis and substantiability."[57] Therefore, auditing labeling schemes to ensure the accuracy of claims is important.[58]

Maximizing the environmental benefits of eco-labels also requires the incorporation of the complete information of a product's impact.[59] Life-cycle assessment, also termed cradle-to-grave analysis, provides such comprehensive information.[60] The EPA defines life-cycle assessment as "[a] concept and methodology to evaluate the environmental effects of a product or activity holistically, by analyzing the whole life cycle of a particular product, process, or activity."[61] A life-cycle assessment reflects the concept that the most severe environmental problems occur during the production process, rather than during a

52. OECD, ECO-LABELLING, *supra* note 43, at 67.

53. *See* Salzman, *supra* note 6, at 43.

54. *See* Peter S. Menell, Symposium, *Environmental Federalism: Structuring a Market-Oriented Federal Eco-Information Policy*, 54 MD. L REV. 1435, 1445 (1995).

55. *See id.*

56. Committee on Trade and Environment, *Report (1996) of the Committee on Trade and Environment* ¶ 65, WTO Doc. WT/CTE/W/40 (Nov. 12, 1996) [hereinafter *CTE Report*].

57. *Id.*

58. DANIEL C. ETSY, GREENING THE GATT: TRADE, ENVIRONMENT, AND THE FUTURE 172 (1994).

59. *See* Salzman, *supra* note 6, at 41.

60. APPLETON, *supra* note 40, at 5.

61. U.S. ENVIRONMENTAL PROTECTION AGENCY, THE USE OF LIFE CYCLE ASSESSMENT IN ENVIRONMENTAL LABELING 2 (1993), *available at* http://www.epa.gov/oppt/library/pdfs/lifecycleassessment.pdf (last visited Nov. 2, 2003).

product's useful life or disposal.[62] Thus, a life-cycle assessment accounts for all stages of a product's life.

Finally, inherent in the success of eco-labels is the creation of a niche market for green goods, conferring a comparative advantage for certain producers.[63] To accommodate this need, only products representing a small percentage of market-share should receive eco-labels.[64] Therefore, "[f]or eco-labels to reach their optimal objective, a balance should be reached between the stringency of the criteria and the number of eco-labeled products."[65] As an increased number of producers alter their products and production methods to meet an eco-label's standards, the criteria for awarding a label should become stricter. This encourages producers to seek out production methods that are even more environmentally friendly.[66] This aspect of green consumerism will be absent from any GM-labeling program because labels identifying GM products attempt to reverse this effect by excluding certain products from the market at large. Additionally, any resulting non-GM product market can hardly be a niche market, because of the existence of many non-GM products.

Momentarily ignoring any negative international trade implications, the recent EC regulations must incorporate a significant number of the characteristics of effective labeling programs if the regulations are to accomplish their environmental goals. Where a mandatory labeling scheme fails to meet crucial elements, such as truthfulness and scientific basis, it is easier to view the regulations as a disguised barrier to trade rather then an environmental protection tool.

IV. EC Regulatory Framework Surrounding the Labeling of Genetically Modified Organisms

The general legislation governing the release and marketing of GMOs in the EC is Directive 2001/18.[67] This horizontal Directive implements "a step-by-step approval process on a case by case assessment of the risks to human health and the environment before any GMO or

62. René Vossenaar, *Process and Production Methods: Sizing Up the Issues from the South*, *in* Trade, Investment and the Environment 152, 153 (Halina Ward & Duncan Black eds., 2000).

63. *See* Salzman, *supra* note 6, at 43.

64. *Id.* at 42–43.

65. OECD, Eco-Labelling, *supra* note 43, at 68.

66. Environmental Labelling in OECD Countries, *supra* note 2, at 13.

67. Council and European Parliament Directive 2001/18/EC of 12 Mar. 2001 On the Deliberate Release Into the Environment of Genetically Modified Organisms and Repealing Council Directive 90/220/EEC, 2001 O.J. (L 106) [hereinafter Directive 2001/18].

product consisting or containing GMOs . . . can be released into the environment or placed on the market."[68] Additionally, there is sectoral legislation governing specific types of GMOs.[69] Directive 2001/18 defers to sectoral legislation where it establishes equivalent standards for risk assessment.[70]

One of the sectoral instruments accompanying Directive 2001/18 is the Novel Foods Regulation.[71] In response to consumer fears over the potential negative effects of "novel foods," the Novel Food Regulation mandates the labeling of a novel food product[72] to indicate the presence of GMOs. The avowed purpose of the Novel Foods Regulation is to protect public health, inform consumers, and subject novel food and food ingredients to a risk assessment before their placement on the market. Article 8 of this regulation details the labeling requirements for novel foods.[73]

On October 18, 2003, the EC published new regulations concerning the labeling of food products with GMOs. Regulation (EC) No. 1829/2003 ("Food and Feed Regulation") focuses on genetically modified food and feed, while Regulation (EC) No. 1830/2003 ("Traceability and Labeling Regulation") concerns the traceability and labeling of GMOs and the traceability of food and feed products produced from GMOs.[74] These regulations begin to apply on April 18, 2004, with the Food and Feed Regulation preempting the Novel Foods Regulations with respect to novel foods or food ingredients containing or produced from GMOs.[75] Additionally, products covered by the Food and Feed Regulation are exempt from the notification and labeling requirements of

68. Press Release, European Commission, Question and Answers on the Regulation of GMOs in the EU 1 (Jan. 28, 2004), *available at* http://europa.eu.int/rapid/pressReleasesAction.do?reference=MEMO/04/16&format=PDF&aged=0&language=EN&guiLanguage=en (last visited July 15, 2004).

69. *See, e.g.*, Council and European Parliament Regulation (EC) No. 258/97 of 27 January 1997 Concerning Novel Foods and Novel Food Ingredients, 1997 O.J. (L 043) [hereinafter Novel Foods].

70. Directive 2001/18, *supra* note 67, art. 12.1, at 8.

71. Novel Foods, *supra* note 69.

72. The Novel Foods Regulation defines a "novel food" as "a food or food ingredient no longer equivalent to an existing food or food ingredient . . . . having regard to the accepted limits of natural variations for [the characteristics of a conventional food or food ingredient]." *Id.* art. 8.1(a), at 5.

73. *Id.* art. 8, at 5.

74. HILDE BRANS, USDA FOREIGN AGRICULTURAL SERVICE, GAIN REPORT E23197, EUROPEAN UNION FOOD AND AGRICULTURAL IMPORT REGULATIONS AND STANDARDS 1 (2003), *available at* http://www.fas.usda.gov/gainfiles/200310/145986500.pdf (last visited Dec. 13, 2003).

75. Food and Feed, *supra* note 13, pmbl. ¶ 11, at 2; However, the Novel Food Regulations still apply to novel foods that do not consist of GMOs. *See id.*

Directive 2001/18.[76] Because this Note focuses on consumer market mechanisms, it will examine the requirements for genetically modified food and ignore the section of the regulations on genetically modified feed.

The Food and Feed Regulation seeks to "ensur[e] a high level of protection of human life and health, animal health and welfare, environmental and consumer interests in relation to genetically modified food and feed, whilst ensuring the effective functioning of the [EC's] internal market."[77] Thus, in comparison with the objective of Directive 2001/18,[78] the Food and Feed Regulation has a wider scope.[79]

Under the Food and Feed Regulation, before selling a regulated-product within the EC, a producer must submit an application to a competent authority of an EC member state.[80] The competent authority then forwards the application to the European Food Safety Authority ("EFSA"), which issues an opinion on the application.[81] The labeling provisions cover foods that "contain or consist of GMOs" or "are produced from or contain ingredients produced from GMOs."[82] The regulation establishes a *de minimis* exception for foods that contain no higher than 0.9% of GMO ingredients, "provided that this presence is adventitious or technically unavoidable."[83] The authorization application includes, *inter alia*: descriptions of the production process; scientific studies relating to the adverse consequences of a product; statements that the food does not give rise to ethical or religious concerns; proposals for monitoring the post-consumption effects; and labeling proposals.[84] During the evaluation process, the EFSA considering the application consults with competent national authorities in member states.[85] Once the EFSA reaches its decision, the opinion is publicly available and the pub-

76. *Id.* art. 43, at 20–21. Because this Note focus on the specific requirements of the Food and Feed regulation and the Traceability and Labeling Regulation, it does not consider Directive 2001/18. For a discussion on Directive 2001/18's compliance with the SPS Agreement, see Aaron A. Ostrovksy, Note, *The New Codex Alimentarius Commission Standards For Food Created with Modern Biotechnology: Implications for the EC GMO Framework's Compliance with the SPS Agreement*, 25 MICH. J. INT'L LAW 813 (2004).

77. Food and Feed, *supra* note 13, art. 1(a), at 5.

78. Directive 2001/18, *supra* note 67, art. 1, at 4.

79. Joanne Scott, *European Regulation of GMOs and the WTO*, 9 COLUM. J. EUR. L. 213, 217 (2003).

80. Food and Feed, *supra* note 13, art. 5.2, at 7. Essentially, there will be one competent national authority in each EC member state. This note will refer to EC members as "member states." "Member" is a reference to a WTO party.

81. *Id.* art. 6, at 8–9.

82. *Id.* art. 12.1, at 11.

83. *Id.* art. 12.2, at 11.

84. *Id.* art. 5.3, at 7.

85. *Id.* art. 6.4, at 8. This provision applies to "GMOs or food containing or consisting of GMOs." *Id.*

lic may make comments regarding the decision to the European Commission ("Commission").[86] In turn, the Commission submits a draft decision and a regulatory committee issues a final decision.[87] After a producer receives authorization, it is subject to the supervision of the Commission, which may modify, suspend or revoke such authorization.[88] A producer must also renew the authorization after ten years.[89]

Once in receipt of an authorization, a producer must follow the specific labeling provisions of Article 13. The requirements detail specific phrases to be used, the size of the label, and the location on the product in order to inform the consumer of the presence of GMOs. For example, if the product contains a list of ingredients, the words "genetically modified" or "produced from genetically modified (name of the ingredient)" must immediately follow the altered ingredient.[90] If there is no list of ingredients, then words indicating the presence of GMOs "shall appear clearly on the label[].'"[91] The label must also mention:

> (a) [when] a food is different from its conventional counterpart as regards [to] the following characteristics or properties: (i) composition; (ii) nutritional value or nutritional effects; (iii) intended use of the food; [or] (iv) implications for the health of certain sections of the population, [and] (b) [when] a food may give rise to ethical or religious concerns.[92]

Through the Traceability and Labelling Regulation, the EC seeks to monitor the effects of GMOs and to facilitate the withdrawal of GM products subsequently deemed harmful to public health and the environment.[93] The regulation does so by imposing notification and labeling requirements on any person involved in the production and distribution chain of the product (except the consumer).[94] The authorization and labeling requirements of the Traceability and Labelling Regulation mirrors the spirit of the Food and Feed Regulation.

The purported focus of the two regulations classify them as a labeling schemes designed to protect the environment, human and animal welfare and to protect consumer choice. Despite this, their environmentally protective nature will not insulate them from scrutiny under international trade law. Generally, eco-labeling schemes are subject to

86. *Id.* art. 6.7, at 9.
87. *Id.* arts. 7.1, 7.3, at 9.
88. *Id.* arts. 9, 10, at 10.
89. *Id.* art. 11, at 10–11.
90. *Id.* art. 13.1(a), at 11.
91. *Id.* art. 13.1(c), at 11.
92. *Id.* art. 13.2, at 11–12.
93. Traceability and Labelling, *supra* note 13, art. 1, at 25.
94. *Id.* arts. 3.5, 4, at 25–26.

different levels of analysis under the WTO, depending on characteristics of a given program. Therefore, a brief discussion of the types of eco-labeling schemes is necessary.

V. CATEGORIES OF ECO-LABELING

Outside of the GMO debate, there exist a variety of eco-labeling schemes, each unique in their formation, scope and administration.[95] These schemes contain varying levels of government involvement.[96] Some seek to identify only one particular aspect or use of a product while others incorporate a more holistic assessment of the product.[97] The specific characteristics of a labeling scheme drive the analysis of that scheme under the WTO Agreements.[98]

A. *As Determined by Level of Government Involvement*

The first characteristic to examine is the level of governmental involvement in the labeling scheme. The significance of the level of government involvement in the formation and administration of an eco-labeling scheme arises from the nature of international law and the structure of the WTO.[99] Traditionally, international law is the law of nations, imposing rights and responsibilities on nation-states rather than on private individuals or private organizations. Additionally, the WTO is the product of a multi-lateral treaty regime.[100] Thus, international trade law and the WTO trade rules arguably apply to state action and not private action,[101] and it appears that the greater the level of government involvement, the more the WTO trade rules become relevant.

1. Mandatory Schemes

Mandatory labeling schemes exhibit the greatest level of government involvement.[102] Under these programs, a government regulation requires a product's label to contain certain information before a manufacturer

95. *See* Staffin, *supra* note 9, at 211–24.
96. *Id.*
97. APPLETON, *supra* note 40, at 5–8.
98. *See infra* Part. VI.
99. *See* APPLETON, *supra* note 40, at 27.
100. *See id.* at 87–89.
101. The possibility that the TBT Agreement imposes responsibilities on states to control the actions of local governments and private entities is considered in Part. VI.d, *infra*.
102. *See* Okubo, *supra* note 35, at 603 (equating mandatory labeling schemes with outright government regulations).

can sell it.[103] Due to their mandatory nature, these schemes are not pure market mechanisms. However, they nonetheless operate as a market-oriented policy tool because there is no outright product ban.[104]

Mandatory labeling regulations can either be content-neutral or content-negative.[105] Content-neutral schemes serve an informative purpose, "provid[ing] . . . the consumer [with] reliable product information, which might not be otherwise disclosed, in order to facilitate a purchasing decision."[106] In contrast, content-negative schemes serve to warn consumers of a product's harmfulness, thus acting as "compulsory 'negative advertising.' "[107] Because the EC regulations are in response to fear of GMOs, the regulations impose requirements that place it in the mandatory negative-content category.[108] While the EC's scheme does not fit within the other categories, an introduction is useful for context and important for structuring a WTO-friendly program.

2. Government Sponsored Voluntary Schemes

A reduced level of government involvement characterizes government sponsored voluntary labeling schemes.[109] Unlike a regulation, compliance with these schemes is up to the whim of the manufacturer, and governments take an active role in either the development, administration or funding of the program.[110] The labels often extol the positive attributes of a product by awarding an identifiable label to a product that meets pre-established criteria, often based on some form of life-cycle assessment.[111] Such labels are "content-positive."[112] Unlike mandatory

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103. Staffin, *supra* note 9, at 211.

104. *See* Okubo, *supra* note 35, at 603.

105. Staffin, *supra* note 9, at 215; Okubo, *supra* note 35, at 604.

106. Staffin, *supra* note 9, at 214 (citing U.S. ENVIRONMENTAL PROTECTION AGENCY, STATUS REPORT ON THE USE OF ENVIRONMENTAL LABELS WORLDWIDE 24 (1993) [hereinafter EPA, STATUS REPORT]). The EPA and DOE's fuel economy guides are content-neutral labels. *See supra* note 37 and accompanying text.

107. *Id.* at 211 (providing the example of the U.S. Clean Air Act requiring products containing or manufactured from chlorofluorocarbons and hydrochlorofluorocarbons to carry a warning label).

108. In contrast, regulations that required a product label to say, "This product does not contain genetically modified organisms," would be a positive-content scheme. *See* Okubo, *supra* note 35, at 604–05.

109. *See* Erik P. Bartenhagen, Note, *The Intersection of Trade and the Environment: An Examination of the Impact of the TBT Agreement on Ecolabeling Programs*, 17 VA. ENVTL. L.J. 51, 56 (1997); Okubo, *supra* note 35, at 605.

110. Bartenhagen, *supra* note 109, at 56.

111. *Id.* at 57; For a basic discussion in life-cycle assessments, see *supra* notes 61–63 and accompanying text.

112. Okubo, *supra* note 35, at 604–05.

content-neutral or negative-content schemes, the labels often do not elaborate on the specific reasons for the placement of the label.[113]

3. Private Sponsored Voluntary Schemes

There is no formal level of governmental involvement in private voluntary labeling schemes.[114] Private schemes can take the form of self-declarations or third-party verifications. Self-declarations occur when a manufacturer declares that a product is environmentally friendly.[115] Inevitably, these claims suffer from credibility problems and consumer skepticism.[116] In contrast, third-party schemes avoid these problems due to their unbiased appearance.[117] Labels monitored by third-parties are similar to government sponsored voluntary programs, and often include the placement of a label generally praising the environmental benefits of a product.[118]

B. *As Determined by Depth of Analysis: Single and Multiple-Criteria Schemes*

The second important criterion to examine is the depth of the analysis done by the labeling authority. Single-attribute schemes describe one specific trait of a product, but do not provide an overall view of the product's environmental impact.[119] These programs are flexible and less costly to implement, but are replete with shortcomings.[120] Focusing on one area, such as GMOs, may camouflage other positive environmental aspects of the product.[121] Additionally, such labels provide little information to consumers comparing similar food products consisting of ingredients from many different countries.[122] Finally, a voluntarily administered single attribute scheme is particularly susceptible to misstatements by producers.[123]

On the other hand, multiple-criteria schemes provide a consumer, either explicitly or implicitly, with a more complete assessment of a product's environmental impact.[124] These schemes rely to some extent on

113. Bartenhagen, *supra* note 109, at 56–57.
114. *Id.* at 57; Okubo, *supra* note 35, at 607.
115. Bartenhagen, *supra* note 109, at 57–58; Okubo, *supra* note 35, at 607–09.
116. Staffin, *supra* note 9, at 216 (citing EPA, STATUS REPORT, *supra* note 106, at 6); Bartenhagen, *supra* note 109, at 57–58.
117. Bartenhagen, *supra* note 109, at 59; Okbuo, *supra* note 35, at 607–08.
118. Bartenhagen, *supra* note 109, at 58.
119. APPLETON, *supra* note 40, at 8;
120. *Id.* at 9.
121. *Id.*
122. *Id.*
123. *Id.*
124. *See id.* at 5.

a life-cycle assessment, and result in the placement of labels that act as either a content-neutral report card or a seal of approval,[125] and do not provide detailed information to the consumer of the environmental analysis behind the label.[126]

For analysis under the WTO Agreements, it generally is helpful to classify a labeling program as either based on single-attribute or multiple-criteria assessment. However, these distinctions might be misleading and problematic, as the EC's regulations aim to identify products containing, consisting of, or produced from GMOs, thus arguably implicating a quasi-life-cycle assessment while focusing on one product attribute.

VI. WTO IMPLICATIONS

A. *General Concerns with the EC Regulations*

One of the fundamental concerns with a government regulation relating to product labeling is that it is a veiled non-tariff barrier to trade, in violation of one of the WTO Agreements.[127] While the purpose of the WTO is to promote free trade, the WTO does not positively limit the ability of a member to enact domestic regulation.[128] Instead, members are free to pursue domestic policies so long as they do not run afoul of the WTO provisions on discrimination or arbitrariness.[129] Mandatory labeling implicates these provisions because requiring a label identifying a given trait results in *de facto* discrimination against non-labeled products.[130] At first glance, however, many of the arguments used to denounce the legality of labeling schemes in international trade law appear inapplicable to the GMO debate.

The irrelevance of these arguments results from their non-traditional source: developing countries. Historically, the trade and environment debate maintains a North-South dimension, with developing countries contesting the legality of environmental measures taken in the developed

125. Staffin, *supra* note 9, at 219–20. The extent that a life-cycle assessment incorporates non-product related process and production methods determines the applicability of the TBT Agreement to the labeling scheme. *See infra* Part. VI.D.

126. APPLETON, *supra* note 40, at 5.

127. *See* Salzman, *supra* note 6, at 43.

128. Robert Howse & Petros C. Mavroidis, *Europe's Evolving Regulatory Strategy for GMOs—The Issue of Consistency with WTO Law: Of Kine and Brine*, 24 FORDHAM INT'L L.J. 317, 318 (2000).

129. *Id.*; Parts V.C-E, *infra*, addresses the implicated provisions of the WTO Agreements.

130. *See* Tietje, *supra* note 31, at 129.

North.[131] Conversely, within the current debate, the United States is the party contesting the legality of environmental measures, advocating the interests of large multi-national corporations.[132] Thus, few would view the regulations as a unilateral attempt by developed countries to export domestic environmental laws to developing countries or an unfair attempt at penalizing developing countries for global environmental problems they did not cause.[133]

Though external to the WTO, aspects of international environmental law provide support for the EC regulations. Specifically, Principle 11 of the Rio Declaration states that environmental legislation "should reflect the environmental and developmental context to which [it] applies."[134] From the United States' perspective, it could not argue in good faith that EC regulations run afoul of this principle. Following the language of Principle 11, it is apparent that legislation in one developed country would be appropriate in other developed countries.[135]

It appears difficult for the United States to argue that the costs associated with applications for product authorizations act as a barrier to trade because the U.S. represents the interests of well-financed GMO producers. Unlike an industrial manufacturer in Thailand, manufacturers of GMOs should possess the financial resources to support their authorization application. With the enormous capital expenditures that accompany the development of GMOs, it would seem disingenuous to argue that there are no additional funds available to market GM products in Europe. However, the capital resources available to most U.S. companies may not be available in developing countries, which use GMOs domestically in an attempt to reap the benefits of disease, drought, or pest resistant GM crops and sell excess production to Europe.[136] The potential use of GMOs by developing countries to increase agricultural yield revives the argument that the EC regulations are an attempt to export EC law. Thus, producers in developing countries that are unable to

131. *See* Staffin, *supra* note 9, at 209–10.

132. *See* U.S. Panel Request, *supra* note 12, Annex I.

133. In *United States—Tuna*, a GATT Panel noted that if members were unilaterally to export their domestic environmental policies, it would frustrate the purposes of the multilateral trading agreement. United States—Restrictions on Imports of Tuna, Aug. 16, 1991, 30 I.L.M. 1594, ¶ 5.27 (1991) (not adopted).

134. Rio Declaration, *supra* note 46, princ. 11.

135. *See id.* The second sentence of Principle 11 states that "[s]tandards applied by some countries may be inappropriate and of unwarranted economic and social cost to other countries, in particular developing countries." *Id.* Thus, the focus of Principle 11 is taking into account the differences between developing countries vis-à-vis developed countries and not between developed countries.

136. *See* Staffin, *supra* note 9, at 266 (noting the concern by developing countries that labeling programs impose greater costs on firms in developing countries than firms in developed countries).

finance the authorization process might be forced to accept reduced crop-yields (and less profits) or forgo the European market altogether.[137]

A second fundamental concern with the EC regulations' validity arises because the regulations are the product of a regional supranational organ. Thus, producers from countries outside the EC lacked influence during the development of the criteria required for authorization. This lack of participation strengthens the possibility for discriminatory application of the regulations. Generally, the decision to label a given product often "reflect[s] local environmental conditions . . . and local preferences for specific environmental product attributes, which may . . . result in overlooking the positive environmental qualities of imported products."[138] Of course, as noted in Part II, there is a debate over whether the benefits of GM product are positive *environmental* attributes. In either event, this lack of involvement is a result of intra-EC priorities illustrated by the scope of the regulations.

B. *Background: GATT, the TBT Agreement and the SPS Agreement*

Analyzing the EC regulations under the WTO trade regime raises doubts as to their legality. Specifically, the regulations concern three of the WTO's annexed agreements: the SPS Agreement (detailing the rights and obligations of members to implement domestic sanitary and phytosanitary measures), the TBT Agreement (detailing the obligations of members with regard to the implementation of technical regulations and standards), and GATT 1994 (containing, among other thing, provisions on nondiscrimination).

The WTO Agreement structures its various related agreements in a legal hierarchy, establishing which agreement prevails in the event of a conflict.[139] The WTO Agreement itself stands at the top of this hierarchy, prevailing over any of the annexed multilateral trade agreements.[140]

As between GATT 1994 and the SPS Agreement, the general interpretive note to Annex 1A (containing the Multilateral Agreements on Trade in Goods) provides: "In the event of conflict between a provision of the [GATT 1994] and a provision of another agreement in Annex 1A to the [WTO Agreement], the provision of the other agreement shall prevail *to*

137. *See* Rick Weiss, *Starved for Food, Zimbabwe Rejects U.S. Biotech Corn*, WASH. POST, July 31, 2002, at A12 (citing the hindrance of future exports of corn to Europe as a possible reason for the Zimbabwe government rejecting food aid that includes GM corn).

138. Seung Wha Chang, *GATTing A Green Trade Barrier—Eco-Labelling and the WTO Agreement on Technical Barriers to Trade*, J. WORLD TRADE, Feb. 1997, at 137, 138.

139. APPLETON, *supra* note 40, at 87.

140. WTO Agreement, *supra* note 10, art. XVI(3), 33 I.L.M. at 1152.

the extent of the conflict."[141] Thus, if there is no direct conflict between the two agreements, both apply. Where there is a direct conflict, the SPS Agreement applies. This same analysis applies as between GATT 1994 and the TBT Agreement.

As between the SPS and TBT Agreements, the TBT Agreement states that "the provisions of this Agreement do not apply to sanitary and phytosanitary measures as defined in Annex A of the [SPS Agreement]."[142] Furthermore, the SPS Agreement provides that "[n]othing in this Agreement shall affect the rights of Members under the [TBT Agreement] with respect to measures not within the scope of this Agreement."[143] Thus, as regards specific categories of measures, as defined in SPS Annex A, the Appellate Body will apply the SPS Agreement exclusively.[144]

For analytical purposes, the WTO receives interpretive guidance from the customary practices established by GATT.[145] Therefore, the DSB and the WTO's Appellate Body ("Appellate Body") may look towards GATT jurisprudence when interpreting analogous provisions in the TBT Agreement and the SPS Agreement. Nonetheless, in *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products* ("*Asbestos*"), the Appellate Body noted that similar provisions throughout various agreements "must be interpreted in light of the context, and of the object and purpose, of the provision at issue, and of the

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141. *Id.* General interpretive note to Annex 1A, 33 I.L.M. at 1154 (emphasis added). Annex 1A lists the WTO's annexed agreements, which include the SPS Agreement and the TBT Agreement.

142. TBT Agreement, *supra* note 17, art. 1.5, at 22052. Annex A of the SPS Agreement defines a sanitary or phytosanitary measure as a 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.

SPS Agreement, *supra* note 16, Annex A(1), at 21903.

143. SPS Agreement, *supra* note 16, art. 1(4), at 21896.

144. Howse & Mavroidis, *supra* note 128, at 321.

145. WTO Agreement, *supra* note 10, art. XVI(1), 33 I.L.M. at 1152. While the WTO's Appellate Body often looks towards previous disputes for guidance, the principle of *stare decisis* does not apply.

object and purpose of the covered agreement in which the provision appears."[146]

C. *Applying the SPS Agreement*

1. Are the EC Regulations within the Scope of the SPS Agreement?

As indicated above, if the EC regulations are a valid measure under the SPS Agreement, exclusivity applies and the Appellate Body's inquiry into the EC regulations should end. However, it must first be determined if the SPS Agreement governs the EC regulations. The basic rights under the SPS Agreement allow members "to take sanitary and phytosanitary measures necessary for the protection of human, animal or plant life or health, provided that such measures are not inconsistent with the provisions of this Agreement."[147] Annex A, which defines sanitary and phytosanitary ("SPS") measures,[148] provides that such measures include:

> [A]ll relevant laws, decrees, regulations, requirements and procedures including, *inter alia*, end product criteria; processes and production methods; testing, inspection, certification and approval procedures; quarantine treatments including relevant requirements associated with the transport of animals or plants, or with the materials necessary for their survival during transport; provisions on relevant statistical methods, sampling procedures and methods of risk assessment; *and packaging and labelling requirements directly related to food safety.*[149]

Thus, it appears that the SPS Agreement is clearly applicable to mandatory labeling schemes. However, a textual analysis of the Food and Feed Regulation raises some doubts as to whether they can withstand scrutiny as an SPS measure.[150] Specifically, the SPS Agreement does not explicitly authorize measures deemed to protect *consumer interests*. While Annex A states that an SPS measure may be in the form of "packaging and labeling requirements *directly related to food safety*,"[151] it mentions nothing about protecting consumer interests. The Food and

146. European Communities—Measures Affecting Asbestos and Asbestos-Containing Products, Mar. 12, 2001, WTO Doc. WT/DS135/AB/R, ¶ 88.

147. SPS Agreement, *supra* note 16, art. 2, at 21896.

148. *Id.* Annex A(1), at 21903.

149. *Id.* (emphasis added).

150. Scott, *supra* note 79, at 228; Julian Wong, Note, *Are Biotech Crops and Conventional Crops Like Products? An Analysis under GATT*, 2003 DUKE L. & TECH. REV. 0027, ¶ 12 (2003), *available at* http://www.law.duke.edu/journals/dltr/articles/PDF/2003DLTR0027.pdf (last visited Feb. 28, 2004).

151. SPS Agreement, *supra* note 16, Annex A(1), at 21903 (emphasis added).

Feed Regulation lists consumer protection as a goal.[152] Thus, it is possible that the rule of SPS exclusivity delineated in TBT Article 1.5 no longer applies.[153]

In contrast to the Food and Feed Regulation, the Traceability and Labeling Regulation more closely conforms to the definition of an SPS measure, as its stated objectives do not explicitly include promoting consumer interests.[154] However, the preamble of the regulation references the goals of ensuring consumer choice in accordance with the Food and Feed Regulation.[155] Because the EC regulations encompass a broader range of objectives than the SPS Agreement allows, it is likely the Appellate Body would also analyze them under the TBT Agreement.[156]

2. Are the EC Regulations Consistent with the SPS Agreement?

Assuming arguendo that the Appellate Body concludes that the regulations fit within the scope of the SPS Agreement, the regulations must still satisfy the Agreement's basic requirements. First, under the SPS Agreement, measures must not arbitrarily or unjustifiably discriminate between members and may not be disguised restrictions on international trade.[157] This general obligation mirrors the chapeau to GATT's Article XX, discussed below. Second, under SPS Article 2.2, members must ensure that measures are "based on scientific principles and [are] not maintained without sufficient scientific evidence. . . ."[158] Third, SPS Article 5.1 requires measures to be "based on an assessment . . . appropriate to the circumstances . . . taking into account risk assessment techniques developed by the relevant international organizations."[159] Accordingly, SPS measures must utilize a risk assessment procedure unless then conform to international standards.[160]

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152. Food and Feed, *supra* note 13, art. 1(a), at 5. The Food and Feed Regulation also contains requirements addressing religious and ethical concerns. *Id.* arts. 5.3(g), 12.2(b), at 7, 12.

153. *See* Howse & Mavroidis, *supra* note 128, at 321.

154. *See* Traceability and Labelling, *supra* note 13, art. 1, at 25.

155. *Id.* pmbl. ¶¶ 6, 11, at 24–25.

156. *See* Terence P. Stewart & David S. Johanson, *A Nexus of Trade and the Environment: The Relationship Between the Cartagena Protocol on Biosafety and the SPS Agreement of the World Trade Organization*, 14 COLO. J. INT'L ENVTL. L & POL'Y 1, 32 (2003).

157. SPS Agreement, *supra* note 16, art. 2(3), at 21896.

158. *Id.* art. 2(2), at 21896.

159. *Id.* art. 5(1), at 21898.

160. Robert Howse & Joshua Meltzer, *The Significance of the Protocol for WTO Dispute Settlement*, *in* THE CARTAGENA PROTOCOL ON BIOSAFETY: RECONCILING TRADE IN BIOTECHNOLOGY WITH ENVIRONMENT AND DEVELOPMENT? 482, 485 (Christoph Bail et al. eds., 2002).

a. International Standards and the Presumption of Consistency wth the SPS Agreement

When a member bases an SPS measure on international standards, then the measure is presumptively consistent with the SPS Agreement and GATT 1994.[161] Annex A lists three international organizations whose standards, guidelines and recommendations are international standards for the purposes of the SPS Agreement: the Codex Alimentarius Commission (for food safety), the International Office of Epizootics (for animal health and zoonoses), and the International Plant Protection Convention (for plant health).[162] If one of these three organizations has not issued guidelines, international standards can come from "other relevant international organizations open for membership to all Members."[163]

The recent adoption of four texts by the Codex Alimentarius Commission ("Codex Commission")[164] for assessing GMO risks lends significant support to the general EC framework envisaged in Directive 2001/18. The central text issued by the Codex Commission, the Draft Principles for the Risk Analysis of Foods Derived from Modern Biotechnology ("Draft Principles"), encompasses the broad principles of risk assessment, risk management, risk communication, consistency, capacity building and information exchange and review.[165] As indicated above, regulations that "conform to" the standards issued by the Codex Commission are presumptively SPS and GATT 1994 legal. Therefore, if the provisions for risk assessment in the EC regulations "conform to" those in the Draft Principles, then this part of the EC regulations will survive scrutiny under the SPS Agreement. To date, the Codex Commission has yet to complete and issue guidelines for the labeling of GM food.[166] Thus, even assuming that the EC provisions on risk assessment "conform to" the Draft Principles, the EC might still have to look elsewhere to justify the portion of the regulations governing labeling as in conformity with international standards.

Because the Codex Commission has yet to issue standards governing the labeling of GMOs, it is possible that the Cartagena Protocol on Biosafety ("Biosafety Protocol")[167] provides the necessary relevant

161. SPS Agreement, *supra* note 16, art. 3(2), at 21897.

162. *Id.* Annex A(3), at 21903.

163. *Id.* Annex A(3)(d), at 21904.

164. Codex Alimentarius Commission, ALINORM 03/34, Report of the Third Session of the Codex *Ad Hoc* Intergovernmental Task Force on Foods Derived from Biotechnology (2003).

165. *Id.* at 44–46.

166. *See* Codex Alimentarius Commission, ALINORM 03/22A, Report of the Thirty-First Session of the Codex Committee on Food Labelling ¶ 74, at 9 (2003).

167. Cartagena Protocol on Biosafety to the Convention on Biological Diversity, Jan. 29, 2000, 39 I.L.M. 1027 [hereinafter Biosafety Protocol]. The Biosafety Protocol uses the term

international standards.[168] In a trade dispute governing GMOs, the Appellate Body may look towards the Biosafety Protocol in determining whether the disputing parties are fulfilling their WTO obligations.[169] However, as described below, the EC's ability to rely on the Biosafety Protocol is tenuous.

Both the Biosafety Protocol and the SPS Agreement base risk assessments on a variety of factors and import the precautionary principle to allow for the adoption of precautionary measures.[170] In *European Communities—Measures Concerning Meat and Meat Products* ("*Beef Hormones*"), the Appellate Body elaborated on the relationship between the SPS Agreement and the precautionary principle, noting first that "the principle has not been written into the SPS Agreement as a ground for justifying SPS measures that are otherwise inconsistent with the obligations of Members set out in particular provisions of [the SPS Agreement]."[171] The Appellate Body also noted while SPS Article 5.7 reflects the precautionary principle, this does not exhaust the relevance of the Article and it is helpful in interpreting other provisions of the Agreement.[172] Thus, precaution can play a role in the adoption of an SPS measure.

Despite the references to precaution in both the EC regulations and the Biosafety Protocol, the critical inquiry in determining whether the EC regulations benefit from the presumption of legality under the SPS Agreement is whether they "conform to" the relevant provisions of the Biosafety Protocol.[173] In *Beef Hormones*, the Appellate Body concluded that the phrase "conforms to," as used in SPS Article 3.2, suggests a fairly close fit between the regulation and the international standard.[174] However, this does not require an exact fit.[175] Thus, in determining whether a measure "conforms to" international standards, Howse and Mavroidis point out that the "real issue is whether in all relevant respects

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"living modified organism" (LMO) to mean "any living organism that possesses a novel combination of genetic material obtained through the use of modern biotechnology." *Id.* art. 3(g), 39 I.L.M. at 1028. In discussing the Biosafety Protocol, this Note uses "GMO" instead.

168. Stewart & Johanson, *supra* note 156, at 45–47.

169. Howse & Meltzer, *supra* note 160, at 483; for a discussion of the role of non-WTO international agreements in WTO disputes, see Stewart & Johanson, *supra* note 156, at 33–38.

170. Biosafety Protocol, *supra* note 167, arts. 10, 15, Annex III, 39 I.L.M. at 1031, 1033, 1045; SPS Agreement, *supra* note 16, art. 5, at 21898–99.

171. European Communities—Measures Concerning Meat and Meat Products (Hormones), Jan. 16, 1997, WTO Doc. WT/DS26/R/U.S.A, WT/DS48/R/CAN, ¶ 124.

172. *Id.*

173. *Cf.* Howse & Mavroidis, *supra* note 128, at 327.

174. *Hormones*, *supra* note 171, ¶ 163.

175. Howse & Mavroidis, *supra* note 128, at 332.

the [EC] regulation does not attempt to achieve a *higher* level of protection than that which would be achieved by international standards."[176]

Comparing the objectives of the EC regulations with those of the Biosafety Protocol presents some indication of non-conformity. Unlike the EC regulations, the Biosafety Regulations do not explicitly require a label before placing a GM product on the market. However, as Howse and Mavroidis indicate, labeling might be a necessary implication to fulfill the Biosafety Protocol's requirements of risk management.[177] Assuming this is correct, the EC's labeling requirements in the Food and Feed Regulation arguably still seek a higher level of protection than the Biosafety Protocol. Specifically, Article 13 of the Food and Feed Regulation requires a statement where a particular food "may give rise to ethical or religious concerns."[178] In contrast, the Biosafety Protocol's provisions on identification focus on "the conservation and sustainable use of biological diversity, taking ... into account risks to human health."[179] By protecting subjects beyond the scope of the Biosafety Protocol, it is possible that EC regulations seek a higher level of protection than international standards. If so, then the regulations would lose the presumption of validity encompassed in SPS Article 3.2.

b. Requirement of Minimal Intrusion on International Trade

A final relevant requirement of the SPS Agreement is that SPS measures must not be "more trade-restrictive than required to achieve their appropriate level of sanitary or phytosanitary protection, taking into account technical and economic feasibility."[180] The SPS Agreement employs a "reasonably available" analysis when determining if there is a less-restrictive measure.[181] The mandatory nature of the EC regulations fails to comport with the EC's least-restrictive obligations. This does not imply that all mandatory rules are SPS-illegal, but only ones where there is a viable alternative. A viable alternative to the compulsory labeling requirements imposed by the EC regulations is voluntary eco-labeling. The existence of voluntary schemes for environmental product labeling provides evidence of technical feasibility.[182] Regarding economic feasibility, there is little reason to assume the costs of a private scheme will

176. *Id.* at 356.

177. Biosafety Protocol, *supra* note 167, art. 16, 39 I.L.M. at 1034; Howse & Mavroidis, *supra* note 128, at 358.

178. Food and Feed, *supra* note 13, art. 13.2(b), at 12.

179. Biosafety Protocol, *supra* note 167, art. 18.1, 39 I.L.M. at 1035.

180. SPS Agreement, *supra* note 16, art. 5(6), at 21898.

181. *Id.* art. 5(6), at 21898 n.3.

182. *See, e.g.*, ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 43–49 (discussing Germany's Blue Angle label, part. of a government-sponsored voluntary program).

be any greater than those associated with the application process under the Food and Feed and Traceability and Labeling Regulation. Furthermore, while the text of the SPS Agreement demonstrates its applicability to labeling requirements, such labeling measures are not adequate to address SPS risks, as compared with outright import restrictions.[183] Therefore, the policies of the EC's labeling program do not line up with protecting against SPS risks.

D. *Applying the TBT Agreement*

1. Are the EC Regulations within the Scope of the TBT Agreement?

Due to the uncertain nature of the EC regulations as a valid SPS measure, it is also appropriate to analyze the EC regulations under the TBT Agreement. The TBT Agreement seeks "to ensure that technical regulations and standards, including packaging, marking and labelling requirements, and procedures for assessment of conformity with technical regulations do not create unnecessary obstacles to international trade" by establishing more specific obligations than GATT 1994.[184] Additionally, the Agreement recognizes 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," as long as those measures are non-arbitrary or unjustifiably discriminatory.[185]

The use of life-cycle assessments in labeling regimes fuels a debate over the scope of the TBT Agreement. A textual interpretation of the treaty makes it clear that the TBT agreement governs both mandatory and voluntary labels that cover process and production methods ("PPMs") that affect a product's physical characteristics ("product-related PPMs").[186] Though there is no uniform definition of product-related PPMs, "[they] are used to assure the functionality of the product, or to safeguard the consumer who uses the product."[187] However, there is uncertainty over whether the TBT Agreement regulates PPMs not related to a product's physical characteristics ("non-product-related PPMs"), which often are "designed to achieve a social purpose that may or may not matter to a consumer."[188] To date, there have been no Appellate Body

183. *See* APPLETON, *supra* note 40, at 138.
184. TBT Agreement, *supra* note 17, pmbl. para. 5, at 22051.
185. *Id.* pmbl. para. 6, at 22051.
186. Chang, *supra* note 138, at 141.
187. Steve Charnovitz, *The Law of Environmental "PPMs" in the WTO: Debunking the Myth of Illegality*, 27 YALE J. INT'L L. 59, 65 (2002).
188. *Id.* at 65. Charnovitz also notes the flaws with the simplistic use of the related/unrelated distinction. *Id.* at 66.

decisions on the whether the TBT Agreement covers non-product-related PPMs. Analysis of the negotiating history of the treaty suggests that the Agreement does not cover standards based on non-product-related PPMs,[189] but does not reveal any similar exclusion for technical regulations.

While there is no definitive Appellate Body decision on this issue, the generally accepted view is that the TBT Agreement covers *only* labels based on product-related PPMs.[190] To support this, one scholar observes that an ambiguity in the text arises because in the second sentences defining both technical regulations and standards, the words "or (their) related" does not appear between "product" and "process."[191] Instead, the sentences both state, "[i]t may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method."[192]

Thus, if the Appellate Body concludes that the TBT Agreement does not cover non-product-related PPMs, then the Agreement will only apply to the EC regulations that apply to GMOs for food use or food that contains or consists of GMOs, not to the part of the regulations governing non-product-related PPMs.[193]

2. Are the EC Regulations a Non-Tariff Trade Barrier in Violation of the TBT Agreement?

a. The Classification of EC Regulations

To assess the legality of a non-tariff trade barrier, the TBT Agreement creates two classes of rules, one for technical regulations and one for standards. A technical regulation is a "[d]ocument which lays down product characteristics or their related processes and production methods, including the applicable administrative provisions, with which compliance is mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method."[194] In contrast, a standard is a:

> Document approved by a recognized body, that provides, for common and repeated use, rules, guidelines or characteristics for

189. For a detailed discussion, see Chang, *supra* note 138, at 142–47.

190. APPLETON, *supra* note 40, at 93 (finding support in the negotiating history of the TBT Agreement).

191. Chang, *supra* note 138, at 142.

192. TBT Agreement, supra note 17, at Annex 1(1–2), at 22066.

193. *See* Food and Feed, *supra* note 13, art. 1, at 5–6; Traceability and Labelling, *supra* note 13, art. 1, at 25.

194. TBT Agreement, *supra* note 17, at Annex 1(1), at 22066.

> products or related processes and production methods, with which compliance is not mandatory. It may also include or deal exclusively with terminology, symbols, packaging, marking or labelling requirements as they apply to a product, process or production method.[195]

For classification purposes, the difference between the two is the compulsory nature of technical regulations—compliance with standards is not mandatory.[196] Thus, the mandatory nature of the EC regulations places them in the category of technical regulations.

b. TBT Agreement's Rules Governing Technical Regulations

TBT Article 2 governs the preparation, adoption, and application of technical regulations by central government bodies. TBT Article 2.1 imports the most-favored-nation ("MFN") and national treatment obligations from GATT, requiring members to accord imported products "treatment no less favourable than that accorded to like products of national origin and to like products originating in other countries."[197] TBT Article 2.2 requires that regulations not create "unnecessary obstacles to international trade."[198] For this purpose, a regulation must "not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create."[199] Legitimate objectives include "[the] protection of human health or safety, animal or plant life or health, or the environment."[200]

Where possible, regulations must use relevant international standards. If the international standards are used, then there is a rebuttable presumption that the regulation is *not* an "unnecessary obstacle to trade."[201] The TBT Agreement, unlike the SPS Agreement, has no explicit reference to any external standards.[202] However, TBT Article 2.9 contains notice and consultation requirements that must be met if relevant international standards do not exist.[203] However, a member may forgo these requirements in urgent situations, provided it notifies other members of

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195. *Id.* at Annex 1(2), at 22066.
196. APPLETON, *supra* note 40, at 93.
197. TBT Agreement, *supra* note 17, art. 2.1, at 22052. The MFN and National Treatment principles are addressed in greater detail in Part. VI.E, *infra*.
198. TBT Agreement, *supra* note 17, art. 2.2, at 22052.
199. *Id.*
200. *Id.*
201. *Id.* arts. 2.4–5, at 22052.
202. *See supra* notes 161–69 and accompanying text.
203. *See* TBT Agreement, *supra* note 17, art. 2.9, at 22053.

the urgent problem.[204] Regardless of whether the EC based the regulations on international standards, the regulations run into difficulty with the EC's obligations under the TBT agreement.

1. Compliance with TBT Article 2.1

On their face, the preamble of the EC regulations appear to comport with the TBT Agreement's MFN and national treatment principles. It is difficult to tell if the regulations actually correspond because it is impossible to predict exactly how the European Food and Safety Authority will apply the EC regulations. However, the preamble of Food and Feed Regulation provides that "requirements arising from this Regulation should apply in a non-discriminatory manner to products originating in the [European] Community and imported from third countries."[205] Furthermore the regulations apply across the board to both EU and non-EU producers.

i) "Like Product" Test

Even if there are some concerns with the EC regulations, in practice, GATT jurisprudence will uphold the restrictions so long as they do not discriminate against "like products."[206] However, what constitutes a "like product" is debatable, as none of the WTO Agreements define the term. Complicating this analysis is that the meaning of "like products" depends on the object and purpose of the agreement where the provision appears.[207]

In seeking to validate the regulations, the EC will argue that GM products are sufficiently different than similar non-GM products. This reflects the EC view that once science uses biotechnology to modify a product (as opposed to traditional hybridization techniques), it is substantially different.[208] The regulations support this belief by stating: "the labelling should give information about any characteristic or property which renders a food or feed different from its conventional counterpart with respect to composition, nutritional value or nutritional effects."[209] Additionally, the application for authorization must include an analysis "showing that the characteristics of the food are not different from those of its conventional counterpart having regard to accepted limits of natural

204. *Id.* art. 2.10, at 22053.
205. Food and Feed, *supra* note 13, pmbl. ¶ 43, at 5.
206. Okubo, *supra* note 35, at 612.
207. *See supra* note 146 and accompanying text.
208. *See* Kim JoDene Donat, Note, *Engineering Akerlof Lemons: Information Asymmetry, Externalities, and Market Information in the Genetically Modified Food Market*, 12 MINN. J. GLOBAL TRADE 417, 429 (2003).
209. Food and Feed, *supra* note 13, pmbl. ¶ 22, at 3.

variations for such characteristics."[210] Overall, the text appears to exempt food that bears a substantial similarity to its non-GM counterpart.

In spite of these narrow exemptions, the regulations still raise problems under a "like products" analysis. Initially, the differentiation of a conventional and non-conventional product, based on "accepted limits of natural variations," lacks certainty. This vague definition allows the European Food Safety Authority to finesse its judgment when making an authorization decision on a product. Therefore, the administration of the regulation may result in *de facto* discrimination of similar products, violating the TBT Agreement.

ii) Previous GATT Panel and Appellate Body Reports on "Like Products" Issues

Previous GATT Panel ("Panel") reports considering the "like products" issue also raises questions of the legality of the EC regulations. The Panel in *Japan—Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages* focused its inquiry first on whether the products were "directly competitive or substitutable," and second on whether the scheme was discriminatory or protective.[211] Later Panel and Appellate Body decisions, where the likeness of the products was not straightforward, modified this process into a single, continuous step,[212] with a finding of likeness dependent on finding of a protective purpose, such as the protection of domestic markets.

Applying these principles to the EC regulations, it is difficult to determine whether GM and non-GM products are directly competitive or substitutable. Significant levels of consumer fear over GM products support the argument that the products occupy two different markets. However, it is important to note that these Panel decisions interpreted regulations as tariff regulations under GATT and not as technical barriers under the TBT. Even though Panels may draw interpretive guidance from prior GATT decisions, a dispute under the TBT Agreement requires special considerations due to the technical nature of the barrier. Overall, whether the EC regulations discriminate against like products is difficult to determine due to the nuanced argument over how similar products must be to qualify as "like products."

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210. *Id.* art. 5.3(f), at 7.

211. Japan—Customs Duties, Taxes and Labelling Practices on Imported Wines and Alcoholic Beverages, Nov. 10, 1987, GATT B.I.S.D (34th Supp.) at 83, ¶ 5.5; APPLETON, *supra* note 40, at 97.

212. *See* APPLETON, *supra* note 40, at 97–99.

2. Compliance with TBT Article 2.2

In contrast, the EC labeling scheme encounters obstacles under Article 2.2 of the TBT Agreement, which requires regulations not to create "unnecessary obstacles to trade." The "legitimate objective" element of this provision allows the EC to rely on the various phrases in the regulation relating directly to health, safety and the environment. Once again, however, the breadth of the regulations might limit the EC's ability to argue that the EC regulations fulfill a legitimate objective, as protection of consumer interests is not among the enumerated objectives of the TBT Agreement. Of course, there may be sufficient overlap between regulations protecting human health and regulations promoting consumer choice to sustain the EC regulations as fulfilling a legitimate objective under the TBT.

3. Compliance with TBT Article 2.9

Because no international standards regarding labeling exist, the EC does not have to base the labeling aspect of its program on international standards. However, the recently adopted standards by the Codex Commission concerning risk assessment procedures for GMOs may alter this analysis. Despite possibly receiving this protection, the EC regulations subsequently violate Article 2.9, which require notice and consultation before the implementation of a technical regulation.

The regulations also run into difficulty under the "not more trade-restrictive than necessary" clause. Under this least-restrictive analysis, the Appellate Body has considerable discretion. Unlike the least restrictive means tests applied under GATT Article XX,[213] the complaining parties (the United States, Canada and Argentina) bear the burden of proving that the EC "failed to ensure in the regulatory process that its measure[s are] the least restrictive of trade."[214] This suggests that under the TBT Agreement, the complaining parties will have difficulty disputing that the EC regulations are not least-restrictive.[215] Furthermore, it is possible that because the mandatory EC scheme covers only one issue, an Appellate Body will find that that benefits of informing consumers outweigh the incidental effects on international trade.[216] Nonetheless, the

213. *See infra* Part. VI.E.

214. Robert Howse & Elisabeth Tuerk, *The WTO Impact on International Regulations*, *in* THE EU AND THE WTO: LEGAL AND CONSTITUTIONAL ISSUES 283, 309–10 (Gráinee de Búrca & Joanne Scott eds., 2001) (emphasis omitted).

215. *See id.* at 314 (noting that because "the [TBT] Agreement does not set up a general presumption against such regulations as trade barriers,.... [t]he provisions of the TBT Agreement must, then, not be interpreted so broadly as to nullify or fundamentally frustrate the core right to regulate as recognized in the Preamble.").

216. *See* APPLETON, *supra* note 40, at 115.

compulsory nature of the regulations combined with existence of eco-labeling schemes addressing other environmental concerns[217] necessarily means that there are less-restrictive means available.

This analysis does not imply that not all mandatory regulations will comply with the TBT Agreement. If a sufficient number of consumers fear for their health, they will demand non-GM goods, supporting a voluntary labeling regime.[218] Thus, there is little need for a mandatory regulatory regime where a voluntary program is less-restrictive and can accomplish the EC's goals of risk minimization. Additionally, voluntary labeling programs encounter less obstacles under the TBT Agreement, making it easier to adhere to the Agreement's requirements.

E. *Applying the GATT*

Assuming arguendo that a Panel concludes that the TBT and SPS Agreements govern the EC labeling program, the program must also survive scrutiny under GATT 1994.[219] This possibility arises if the Panel decides that the scope of either agreement does not cover non-product-related PPM-based eco-labels. While the TBT Agreement and GATT overlap in some areas, GATT Article XX provides members with exceptions to their GATT obligations. Before considering these exceptions, this Note will examine the basic obligations under GATT Article I and III.

1. Basic GATT Obligations

a. Most Favoured Nation Obligation

Article I:1 describes the MFN obligation, requiring that trade privileges extended by one member be available to all members.[220] As applied to mandatory eco-labeling programs, this requires members to apply labeling requirements equally to products from all member nations. Compliance with this obligation requires a "like products" analysis. Due to lack of empirical data, it is impossible to assess whether the EC regulations comply with this obligation.[221] The regulations appear structurally

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217. *See, e.g.*, ENVIRONMENTAL LABELLING IN OECD COUNTRIES, *supra* note 2, at 43–68.

218. Traceability concerns may pose a problem for such a voluntary program. *See infra* Part. VII.

219. Scott, *supra* note 79, at 229–30 (noting the possibility that the Appellate Body will concurrently apply GATT 1994 and the TBT Agreement and that "a measure which is found to be lawful under the TBT Agreement would not automatically enjoy a 'safe haven' from scrutiny under GATT").

220. GATT 1947, *supra* note 18, art. I(1), 55 U.N.T.S. at 196–98.

221. *See also supra* notes 206–12 and accompanying text.

to comport with the MFN obligation, but administrative practice might show illegal discrimination.

b. National Treatment Provision and "Like Products" Analysis

The national treatment provisions of Article III require that members do not use internal policy tools to protect domestic products.[222] As with the analogous provision in the TBT Agreement, enforcement of the provision focuses on a "like products" analysis.[223] While the PPM-based coverage of the TBT Agreement is uncertain, the general language of GATT and subsequent Panel decisions make it clear that GATT covers both product and non-product related PPMs.

Regarding PPM-based regulations, the Panel's report in *United States—Restrictions on Imports of Tuna* ("*Tuna I*"), discussing mandatory government regulations, states that a member cannot use production methods unrelated to the product's characteristics to justify discrimination.[224] In *Tuna I*, the Panel found that mandatory eco-labeling programs employing criteria based on non-product-related PPMs violate GATT.[225] As a result, the EC could not argue that GM products are not like products because of any non-product-related PPM, but it could still support its regulations by referring to product-related PPMs. Additionally, the EC will argue that the products are not directly substitutable. The efficacy of this argument depends on whether the regulations have a protective purpose.[226] As noted earlier, because their recent enactment, the protective nature of the regulations is unclear.

Possibility supporting an EC argument that GM and non-GM products are not like products is *Asbestos*, where the Appellate Body adopted the use of four criteria to analyze product "likeness":

> (i) the properties, nature and quality of the products; (ii) the end-uses of the products; (iii) consumers' tastes and habits—more comprehensively termed consumers' perceptions and behaviour—in respect of the products; and (iv) the tariff classification of the products.[227]

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222. GATT 1947, *supra* note 18, art. III(1), 55 U.N.T.S. at 204.

223. *Id.* art. III(4), 55 U.N.T.S. at 206.

224. United States—Restrictions on Imports of Tuna, Aug. 16, 1991, 30 I.L.M. 1594, ¶ 5.14 (1991) (not adopted); Okubo, *supra* note 35, at 618.

225. *See* Bartenhagen, *supra* note 109, at 66.

226. *See supra* notes 211–12 and accompanying text.

227. European Communities—Measures Affecting Asbestos and Asbestos-Containing Products, Mar. 12, 2001, WTO Doc. WT/DS135/AB/R, ¶ 85.

In *Asbestos*, the Appellate Body reversed the Panel's findings that the disputed asbestos products were "like products," stressing that the Panel "should have examined the evidence related to *each* of [the] four criteria and, then, weighed *all* of that evidence, along with any other relevant evidence, in making an *overall* determination of whether the products at issue could be characterized as 'like.' "[228] Furthermore, a determination of "likeness" focuses on "the nature and extent of a competitive relationship between and among products."[229]

The Appellate Body finding of unlikeness rested on a finding of consumer tastes and habits associated with the health risks of asbestos.[230] While an Appellate Body might similarly focus on consumer perceptions to the risks posed by GMOs, these perceptions deserve minimal weight. In *Asbestos*, the health risks that undoubtedly influenced consumer tastes were *verifiable*. The Appellate Body noted that "consumers' tastes and habits . . . are very likely to be shaped by the health risks associated with a product which is *known to be highly carcinogenic*."[231] Within the context of GMOs, there is no basis for providing heavy weight to speculative fears, even with growing evidence of risks. Thus, this minimizes the relative importance of the consumer tastes criterion. However, even if consumer preferences result from irrational beliefs, these beliefs will affect a determination of whether there is a competitive relationship between GM and non-GM products, an critical element in a finding of likeness. Nonetheless, following *Asbestos*, a "like products" analysis requires a consideration of all four criteria and all available evidence and does not require elevating consumer preferences above the other factors.

2. General Exceptions to GATT Obligations

Despite the broad proscriptions against discrimination, GATT provides a vehicle for members to escape their obligations in limited circumstances. Therefore, if the EC is engaging in discrimination, it must seek refuge under these exceptions. GATT Article XX, provides, in pertinent part:

> *General Exceptions*
>
> Subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same

228. *Id.* ¶ 109 (emphasis in original). According to the Appellate Body, the Panel's finding of "likeness" did not properly consider three of the four criteria; in fact, the Panel only considered the first criterion in its "likeness" determination. *Id.*

229. *Id.* ¶ 99.

230. *Id.* ¶ 121.

231. *See id.* (emphasis added).

conditions prevail, or a disguised restriction on international trade, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any [member] of measures:

. . . .

I.

. . .

(b) necessary to protect human, animal, or plant life or health;[232]

As shown earlier, the TBT Agreement contains nearly identical language which conditions a member's ability to impose non-tariff trade barriers.[233] Similarly, the EC regulations fail to fit under this exception.

The key operative language of the environmental exceptions is the term "necessary," which is not defined anywhere in the treaty. However, Panels and Appellate Bodies narrowly interpret this term, making it difficult for a country to utilize this exception. In *Asbestos*, the Appellate Body quoted an earlier Panel decision in *Thailand—Restrictions on Importation of and Internal Taxes on Cigarettes* which concluded the measure at issue is " 'necessary' in terms of Article XX(b) only if there were no alternative measure consistent with [GATT], or less inconsistent with it, which Thailand could *reasonably be expected to employ to achieve its health policy objectives*."[234] Furthermore, in *Tuna I*, the Panel narrowly interpreted the term "necessary" to require least-restrictive measures before a country can seek protection under Article XX(b).[235]

In determining whether there is a less restrictive measure available which the member could reasonably be expected to employ, the Appellate Body employs a balancing test.[236] Among other things, this balancing test includes:

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232. GATT 1947, *supra* note 18, art. XX:I(b), 55 U.N.T.S. at 262. Article XX(g) provides an exception for measure "relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption." *Id.* art. XX(g), 55 U.N.T.S. at 262. This section will not be discussed in this note due to its tenuous relationship with the EC regulations.

233. *See supra* notes 199–200 and accompanying text.

234. European Communities—Measures Affecting Asbestos and Asbestos-Containing Products, Mar. 12, 2001, WTO Doc. WT/DS135/AB/R, ¶ 170 (quoting Thailand—Restrictions on Importation of and Internal Taxes on Cigarettes, Report of the Panel, Nov. 7, 1990, GATT B.I.S.D (37th Supp.) at 200, ¶ 75 (1991).

235. United States—Restrictions on Imports of Tuna, Aug. 16, 1991, 30 I.L.M. 1594, ¶¶ 5.27–28 (1991) (not adopted).

236. Korea—Measures Affecting Imports of Fresh, Chilled and Frozen Beef, WTO Docs. WT/DS161/AB/R, WT/DS169/AB/R, ¶ 164 (Dec. 11, 2000); *Asbestos*, *supra* note 234, ¶ 172.

> [Taking] into account the relative importance of the common interest or values that the law or regulation to be enforced is intended to protect. The more vital or important those common interests or values are, the easier it would be to accept as "necessary" a measure as an enforcement instrument.[237]

This balancing test appears to open the door for the EC to use the GATT Article XX(b) exception to justify their regulations.

The Appellate Body in *Asbestos* concluded that the disputed measure protected the vital interest of "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.*"[238] Completing the balancing test, the Appellate Body concluded that France could not be expected to employ any alternative measure to achieve its desired level of protection, that of halting asbestos risk.[239] France justified its protective measure by choosing a zero-tolerance level of protection for a vital interest.

In contrast, the EC regulations do not target a well-defined risk and do not provide for a complete ban against the GM products. Indeed, the nature of the authorization process contemplates that at least some GM products will enter the EC. Furthermore, the exceptions embodied in GATT Article XX(b) (and elsewhere in Article XX) do not extend to regulations seeking consumer protections.[240] Once again, the breadth of the EC regulations raise doubts as to their validity.

Overall, the "alternative measure" test marginalizes the use of this exception when considering the legality of mandatory labeling programs under GATT.[241] As shown with the analysis of the TBT Agreement above, there is will usually be a less restrictive method for accomplishing the goals of labeling programs. Additionally, under GATT Article XX, the burden of proving least restrictive means falls with the member employing the regulation, rather than the complaining party because the regulation is presumptively discriminatory in violation of GATT Article III.[242] The mandatory character of the EC program ensures accomplishment of the regulation's purported objectives. However, as shown below,

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237. *Korea Beef, supra* note 236, ¶ 162. The Appellate Body subsequently adopted this balancing test when analyzing "necessary" under Article XX(b) in *Asbestos*. *Asbestos, supra* note 234, ¶¶ 172, 175.

238. *Asbestos, supra* note 234, ¶ 172 (emphasis added).

239. *Id.* ¶ 174.

240. Scott, *supra* note 79, at 230.

241. Steve Charnovitz, *Exploring the Environmental Exceptions in GATT Article XX*, J. WORLD TRADE, Oct. 1991, at 37, 48.

242. *See* Howse & Tuerk, *supra* note 214, at 314.

it is possible to have a voluntary program that protects human health and the environment.

In the event the Appellate Body considers the EC regulations "necessary," the regulations must still comply with the requirements in the chapeau to Article XX. Any measures applied under the exceptions must not be applied as "a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or [as] a disguised restriction on international trade."[243] The effect of these requirements is to prevent abuse of the Article XX exceptions.[244]

Regulations unjustifiably discriminate when there is a coercive effect on the policy decisions of foreign governments.[245] Thus, the requirements of the chapeau focus on the application of the measure. For example, in *United States—Import Prohibitions of Certain Shrimp and Shrimp Products*, the Panel found that United States' regulations prohibiting the importation of shrimp caught using a certain type of netting had the effect of forcing other members to adopt the same policies.[246] Because of the uncertain application of the regulations, it is unclear whether the EC regulations comport with the chapeau.

Analysis of the EC regulations illustrates numerous issues that question the validity of them. Regardless of which annexed agreement a Panel or Appellate Body applies to the regulations, they will not survive a WTO challenge. The possibility of implementing a voluntary labeling regime precludes the possibility of a workable government labeling regulation.

VII. A WTO-FRIENDLY ECO-LABELING SCHEME

Despite the obstacles analyzed above, it is possible to develop a GMO labeling scheme compatible with the WTO agreements. Once established, the labeling system will convey information to consumers who can adjust their purchases accordingly. Such a system can fulfill the EC's goals of protecting human and animal health, the environment and consumer interests through the labeling of GM products.

The first fundamental characteristic of a trade-friendly labeling regime is that the regime be voluntary and free from government involvement. For example, a non-governmental organization can

243. GATT 1947, *supra* note 18, art. XX, 55 U.N.T.S. at 262. Principle 12 of the Rio Declaration mirrors this idea. Rio Declaration, *supra* note 46, princ. 12.

244. DAVID HUNTER ET AL., INTERNATIONAL ENVIRONMENTAL LAW AND POLICY 1173 (2d ed. 2002).

245. United States—Import Prohibition of Certain Shrimp and Shrimp Products Oct. 12, 1998, WTO Doc. WT/DS58/AB/R, ¶ 161.

246. *Id.*

authorize the placement of a unique label that identifies a product as GMO-free. Such a program differs from the EC regulations by indicating the absence of GMOs rather than the existence of GMOs. The lack of government involvement immediately places the labeling program on easier footing under the WTO agreements. The labeling system would then be a "standard" rather than "technical regulation" under the TBT Agreement.

As a standard, the program would encounter different, less rigorous obligations under the TBT Agreement. Because it is a multilateral treaty binding state-parties, the TBT Agreement's applicability to private entities is questionable. Nevertheless, Article 4.1 requires members to "take such reasonable measures as may be available to them to ensure that . . . non-governmental standardizing bodies within their territories . . . accept and comply with the Code of Good Practice ["Code"]."[247] Thus, compliance with the Code is optional and is dependent on pressure from central governmental bodies. Regardless of where the standardizing body is located, one can assume that the EC can assert sufficient economic pressure to coerce the body into complying with the Code. Substantively, the Code sets forth several requirements, many of which mirror those for technical regulations. In any event, the nature of an independent voluntary labeling scheme for GMOs minimizes the possibility for international trade disputes.

A voluntary program falls outside the scope of the SPS Agreement as there is no governmental SPS measure. Generally, the provisions of these treaties, including GATT, should not be binding on private actors. Additionally, administration by a private entity will make it increasingly difficult for a single nation, or bloc of nations to unilaterally impose their environmental laws on foreign nations.

To handle concerns about the effectiveness of a non-government run program, regular audits are necessary. Furthermore, individual countries could prevent program abuse by applying truth-in-advertising legislation to labeling claims.

Even though by definition a private sponsored voluntary scheme indicates a lack of government involvement, governments will likely be able to have some measure of influence in the development and administration of the scheme. In this case, such a labeling scheme will deviate from the ideal of zero government involvement. However, the international arena in which the labeling regime will operate should prevent a single country from excessively exerting its influence. Nonetheless, even if the labeling scheme is a government-sponsored

247. TBT Agreement, *supra* note 17, art. 4.1, at 22054.

voluntary scheme, the less obtrusive nature of the voluntary program minimizes the possibility that it will violate WTO provisions.

A correlative requirement of a voluntary scheme is increased transparency, during both the development and the administration of the program. The CTE recognizes that "[i]ncreased transparency can help deal with trade concerns regarding eco-labelling schemes/programmes while it can also help to meet environmental objectives by providing accurate and comprehensive information to consumers."[248] The TBT Agreement's Code of Good Practice already contains provisions on transparency, providing for notice, consultation and participation from interested parties during the criteria setting and drafting of standards.[249] As a result, a WTO-consistent labeling program should be able to incorporate the concerns and differences associated with producers located in a variety of countries with different capabilities.[250]

The standardizing body should draft the authorization procedure so that any producer in any nation can easily apply for a label. Thus, the procedure should not be unduly burdensome and impose unnecessary costs when a producer attempts to verify that their product is GM-free. To this end, the TBT Agreement requires members to grant technical assistance and preferential treatment towards developing countries.[251]

A global GM labeling system reduces the burden on producers by creating a single GM label.[252] Negative-content labeling schemes might subject manufacturers to different authorization procedures in different countries, wasting resources. In contrast, a single positive-content scheme indicating the absence of GMOs is more economically efficient.

For the labeling scheme to be effective, the standardizing organization needs to increase consumer knowledge of the label. Consumers must be able to identify easily the label or symbol awarded to the product while also understanding the purpose of the label. Therefore, combining the authorization process with an educational marketing program will fulfill the EC's goals of increasing consumer awareness to protect human health and safety.

A possible downside to a voluntary content-positive scheme is the difficulty of addressing the EC's concerns with traceability and the subsequent removal of GMOs deemed harmful to the environment. In a voluntary system, effective traceability depends upon the rapid growth

248. *CTE Report*, *supra* note 56, ¶ 184.
249. *See generally* TBT Agreement, *supra* note 17.
250. *See* Etsy, *supra* note 45, at 1286.
251. TBT Agreement, *supra* note 17, arts. 11–12, at 22061–62.
252. *See* Damien Geradin, *A Lawyer's View*, *in* TRADE, INVESTMENT AND THE ENVIRONMENT, *supra* note 62, at 91, 94.

of a market for goods designated as GM-free. Under this scenario, a growing market for GM-free food products would shrink the market for foods containing GMOs, ideally eliminating the GM market altogether. While this development likely appeals to opponents of GMOs, it is unlikely to happen quickly enough, if ever. Thus, traceability concerns will remain with any non-labeled goods. However, setting a high standard for indicating the presence of GMOs (stricter than the .9% *de minimis* exception in the EC regulations), combined with market demand for labeled products will diminish the potential negative effects that GM products may pose for society.

Nonetheless, because a voluntary scheme would award labels on products that are "GM free," it is difficult to ensure the integrity of the label without mandatory regulations governing traceability. This problem arises when a manufacturer wishes to place a food product on the market that consists of dozens of ingredients. Unless the manufacturer can exert sufficient downward pressure on its suppliers, the manufacturer will lack the ability to apply for a "GM free" label. This does not, however, require the imposition of mandatory *labels*. The EC can address traceability concerns by implementing chain-of-custody requirements during the food manufacturing process.[253] Such regulations would be separate from the labeling regime and can protect the integrity of the label. While these complementary systems might address traceability concerns, the level of government involvement might bring rise to further WTO disputes.

CONCLUSIONS

The debate over the labeling of GMOs is a logical extension of the increased visibility of the modern environmental movement. Uncertainty over the long term effects of GMOs provides a justifiable rationale for measures designed to increase consumer awareness to the presence of GMOs. However, the WTO inextricably influences the formation, development and legality of such measures. Nonetheless, it is possible to protect consumers from unintentionally purchasing products containing GMOs without resorting to unilateral regulations that conflict with the WTO's goal of reducing barriers to trade. Voluntary, privately run labeling programs provide a mechanism for protecting the environment while comporting with WTO trade rules. If consumers

253. *See, e.g.*, Smartwood, Chain-of-Custody Certification Guidelines and Standards (Aug. 2003), *available at* http://www.smartwood.org/guidelines/coc-guidelines-standards.doc (last visited Mar. 4, 2004) (providing chain-of-custody requirements before wood products can be certified by the Forest Stewardship Council).

fear GM-products, they will increase purchase of these voluntarily labeled products, reducing the market share of products produced from or containing GMOs, validating the theory of green consumerism.