

BEYOND “REACH”?
AN ANALYSIS OF THE EUROPEAN UNION’S
CHEMICAL REGULATION PROGRAM UNDER
WORLD TRADE ORGANIZATION
AGREEMENTS

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INTRODUCTION

The United States chemical industry is big business. Chemical shipments totaled more than US\$459 billion in 2003, US\$91 billion of which were exports.¹ This makes the chemical industry the largest exporting business sector in the United States.² The chemical industry also directly employs one million people and supports an additional four million indirectly-related jobs.³ These economic factors give the chemical industry leverage as it works to protect the interests of chemical businesses and to influence U.S. chemical regulations and policies. Some policymakers, however, are beyond the sphere of the U.S. chemical industry’s influence; namely, policymakers outside of the United States. This becomes significant when another country’s policies affect U.S. chemical companies.

The European Union’s pending chemical regulation has generated great concern within the U.S. chemical industry because it will impose new, more stringent regulations on all chemicals, including imported products, used in the European Union.⁴ The

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¹ AM. CHEMISTRY COUNCIL, GUIDE TO THE BUSINESS OF CHEMISTRY 2004 6 (2004), <http://www.accnewsmedia.com/docs/300/292.pdf>.

² *Id.* at 9.

³ *Id.* at 7.

⁴ *Commission Proposal for a Regulation of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency and amending Directive 1999/45/EC and Regulation (EC) {on Persistent Organic Pollutants} Proposal for a Directive of the European Parliament and of the council amending Council Directive 67/548/EEC in order to adapt it to Regulation (EC) of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals, COM (2003) 0644 final (Oct. 29,*

program, called Registration, Evaluation, and Authorization of Chemicals (REACH), is expected to gain final approval by early 2007.⁵ The program requirements and associated costs have met with opposition from many groups, including the chemical industries in both the United States and the European Union.⁶ The U.S. government, recognizing the potential costs to an economically vital business sector, has also publicly opposed the policy.⁷ And while the E.U. chemical industry may work at a national level to influence the policymakers, the United States will have to fight the policy in the global forum of the World Trade Organization (WTO), where the importance of the chemical industry to the U.S. economy will diminish in significance. This Article demonstrates that this is a dispute the United States will likely lose.

The fight over the REACH regulation highlights a number of recurring conflicts in international environmental law. First, and most generally, REACH demonstrates the potential conflict of environmental policies with the maintenance of liberal trade policies.⁸ One country's environmental policies may have an effect far beyond its borders, and increasing economic globalization, coupled with increasing environmental regulation, has led to a greater number of international disputes based on the actual and perceived use of unilateral environmental regulations as non-tariff trade barriers.⁹

2003). See News Release, European Commission, Chemicals: Commission Presents Proposal to Modernise EU Legislation (Oct. 29, 2003), <http://www.eurunion.org/news/press/2003/2003067A.htm> [hereinafter EC News Release].

⁵ Euractiv.com, Chemicals Policy Review (REACH), <http://www.euractiv.com/Article?tmuri=tcm:29-117452-16&type=LinksDossier> (Aug. 17, 2004).

⁶ Peter Ford, *European Plan to Test Chemical Products Irks US*, CHRISTIAN SCI. MONITOR, Apr. 29, 2004, at 7.

⁷ E.g., Joseph DiGangi, *REACH and the Long Arm of the Chemical Industry*, MULTINATIONAL MONITOR, Sept. 2004, at 20, 22.

⁸ George William Mugwanya, *Global Free Trade Vis-à-Vis Environmental Regulation and Sustainable Development: Reinvigorating Efforts Towards a More Integrated Approach*, 14 J. ENVTL. L. & LITIG. 401, 402 (1999).

⁹ *Id.* at 403. A tariff creates an outright barrier to imports by applying a product tax to imports only. DAVID VOGEL, TRADING UP: CONSUMER AND ENVIRONMENTAL REGULATION IN A GLOBAL ECONOMY 13 (1995). A non-tariff trade barrier may arise when a regulation, on its face, applies equally to domestic and imported products, but in application, the regulation creates a greater disadvantage for imports, in effect creating a barrier. *Id.* at 14.

Second, and more specifically, the controversy over REACH illustrates the perceived divergence between the principles that guide U.S. and E.U. environmental policy.¹⁰ The United States is generally characterized as employing a strict risk-assessment approach to environmental regulations.¹¹ E.U. environmental regulations, on the other hand, are based on the precautionary principle, which is an expressly stated guiding principle for all E.U. legislation.¹² However, as this Article will show, these general and simplistic characterizations of the conflicting regulatory trends do not reflect the actual state of affairs. This Article will discuss the nature of the opposition to the precautionary principle in the United States and will focus on identifying the common ground between U.S. and E.U. policies in this area.

U.S. resistance to the precautionary principle merits attention because it has severely undermined the effectiveness of recent international environmental treaties.¹³ International environmental treaties historically have been the primary means of addressing international environmental issues,¹⁴ and they have been effective in the past.¹⁵ However, the success of recent treaties has declined, in part due to U.S. resistance, and the effectiveness of treaties in environmental regulation has been questioned.¹⁶ Yet U.S. failure to implement international treaties has not shielded it from other nations' application of the precautionary approach. Therefore, an examination of such applications is essential.

¹⁰ Theofanis Christoforou, *The Precautionary Principle, Risk Assessment, and the Comparative Role of Science in the European Community and the US Legal Systems*, in GREEN GIANTS? ENVIRONMENTAL POLICIES OF THE UNITED STATES AND THE EUROPEAN UNION 18, 25 (Norman J. Vig & Michael G. Faure eds., 2004).

¹¹ See Jonathan B. Wiener, *Convergence, Divergence, and Complexity in US and European Risk Regulation*, in GREEN GIANTS? ENVIRONMENTAL POLICIES OF THE UNITED STATES AND THE EUROPEAN UNION, *supra* note 10, at 73.

¹² *Id.* at 81.

¹³ Christoforou, *supra* note 10, at 26.

¹⁴ David M. Driesen, *Thirty Years of International Environmental Law: A Retrospective and Plea for Reinvigoration*, 30 SYRACUSE J. INT'L L. & COM. 353, 354-55 (2003).

¹⁵ *Id.* at 358.

¹⁶ *Id.* at 363.

Finally, and most significantly, the REACH controversy must be considered under the obligations established by the General Agreement on Tariffs and Trade (GATT) and the WTO.¹⁷ The WTO is a relatively young organization, and although its primary function is to ensure an open market for free trade between member nations,¹⁸ it has become increasingly important in reconciling international environmental disputes.¹⁹ Given the diminishing effectiveness of international environmental treaties, the WTO has become the best forum for effective resolution of environmental disputes. When REACH is implemented, a challenge by the United States based on the applicable WTO agreements will certainly follow. Based on the current state of international environmental law, the increasing acceptance of precautionary measures that incorporate risk assessment, and the recent trends in WTO adjudications, this Article will make the case that REACH should be upheld by the WTO. The WTO resolution of the REACH dispute will serve as a precedent for subsequent disputes asserting a conflict between the precautionary principle and the risk assessment approach, and it will guide WTO member nations in developing regulations that comply with WTO agreements.

The Article begins with a review of international environmental law in Part I, followed by a brief review of the history of the European Union in Part II. The differences and similarities between the environmental policies of the United States and the European Union are outlined in Part III, and the REACH program is summarized in Part IV. Part V outlines the structure and role of the WTO. It also considers the REACH program under the requirements of the applicable WTO agreements and in light of past WTO adjudications. Part VI concludes that the WTO Appellate Body has emerged as the most effective forum for resolution of international environmental controversies, based on its responsive and evolving nature.

¹⁷ PHILLIPE SANDS, *PRINCIPLES OF INTERNATIONAL ENVIRONMENTAL LAW* 946 (2d ed. 2003).

¹⁸ WORLD TRADE ORG., *UNDERSTANDING THE WTO* 10 (3d ed. 2003) [hereinafter *UNDERSTANDING THE WTO*].

¹⁹ JOHN H. KNOX, *The Judicial Resolution of Conflicts Between Trade and the Environment*, 28 HARV. ENVTL. L. REV. 1, 2 (2004).

I. INTERNATIONAL ENVIRONMENTAL LAW: HISTORY, SIGNIFICANCE, AND LIMITATIONS

The development of environmental law as a unique discipline has occurred relatively recently. In the United States, the 1970s mark a turning point. Prior to this time, environmental resources were widely perceived to be unlimited.²⁰ The few environmental laws in existence were created in response to specific issues, and little attention was paid to them.²¹ During the 1970s, however, there was a general recognition that threats to the environment caused by ever-increasing industrialization and technological advances could no longer be ignored.²² The growing public concern for the environment was evidenced by the participation of an estimated twenty million Americans in public events to mark the first Earth Day in 1970.²³ During the 1970s, environmental legislation greatly increased in number and scope.²⁴ This new legislation was largely focused on preventing, rather than simply reacting to, environmental damage.²⁵

The advent of environmental regulation on an international level coincided with its emergence in the United States.²⁶ The 1972 United Nations Conference on the Human Environment at Stockholm (Stockholm Conference) marked the recognition of the need for international action.²⁷ The impetus for this conference can be traced to the Intergovernmental Conference of Experts on the Scientific Basis for Rational Use and Conservation of the Resources of the Biosphere,²⁸ which noted the following in its final report:

²⁰ FRANK F. SKILLERN, ENVIRONMENTAL PROTECTION DESKBOOK 4 (2d ed. 1995).

²¹ *Id.* at 2.

²² *Id.* at 2-3.

²³ Daniel A. Farber, *Politics and Procedure in Environmental Law (1992)*, in LAW AND THE ENVIRONMENT, 185, 188 (Robert V. Percival and Dorothy C. Alevizatos eds., 1997).

²⁴ SKILLERN, *supra* note 20, at 2.

²⁵ *Id.* at 3-4.

²⁶ LAKSHMAN D. GURUSWAMY & BRENT R. HENDRICKS, INTERNATIONAL ENVIRONMENTAL LAW IN A NUTSHELL 3 (1997).

²⁷ *Id.*

²⁸ SANDS, *supra* note 17, at 35.

Until this point in history the nations of the world have lacked considered, comprehensive policies for managing the environment. . . .

. . . It has become clear . . . that earnest and bold departures from the past will have to be taken nationally and internationally if significant progress is to be made.²⁹

Thus, a widespread recognition emerged that international law must address issues that had previously been treated solely as domestic matters.³⁰

International environmental law had existed in a limited respect prior to the Stockholm Conference, although, like early U.S. environmental law, it was primarily reactive and fragmentary.³¹ After the Stockholm Conference, however, there was an increased emphasis on preventing harmful environmental effects,³² and the number of international environmental treaties and organizations increased significantly.³³

The general approach of international law is to provide a framework for cooperation and to create binding obligations with which individual nations must comply.³⁴ Each nation alone, however, has jurisdiction to create and enforce the laws that will implement the obligations to which it has agreed to be bound.³⁵ It is the reliance on national implementation that limits the effectiveness of the framework approach. While some international agreements have been successful in addressing environmental issues in this way, others have failed because of a lack of adequate

²⁹ *Id.* (quoting LYNTON KEITH CALDWELL, INTERNATIONAL ENVIRONMENTAL POLICY: FROM THE TWENTIETH TO THE TWENTY-FIRST CENTURY 54 (1996) (quoting UNESCO, INTERGOVERNMENTAL CONFERENCE OF EXPERTS ON THE SCIENTIFIC BASIS FOR RATIONAL USE AND CONSERVATION OF THE RESOURCES OF THE BIOSPHERE: PARIS, 4-13 SEPTEMBER 1968, at 34-35 (1968))).

³⁰ *Id.* at 3.

³¹ *Id.* at 4.

³² *Id.* at 38.

³³ *Id.* at 40.

³⁴ *Id.* at 12.

³⁵ *Id.* at 13.

implementation by individual nations.³⁶ An agreed-upon framework is potentially toothless³⁷ unless it establishes specific procedures of implementation or a protocol for making further progress.³⁸

The 1985 Convention for the Protection of the Ozone Layer in Vienna (Vienna Convention) is an example of a successful treaty-based scheme.³⁹ The Vienna Convention recognized the existence of a global problem relating to the atmosphere⁴⁰ and established a framework for individual nations to follow in adopting measures to reduce destruction of the ozone layer.⁴¹ The convention did not establish specific actions to be taken, but it recognized the principles and procedures that were to guide subsequent action.⁴² The specific actions to be taken were agreed upon in the 1987 Montreal Protocol to the Vienna Convention,⁴³ which set forth specific legal obligations.⁴⁴ Both the Vienna Convention and the Montreal Protocol have been widely implemented.⁴⁵

More recent examples, however, highlight the effects of inadequate implementation. The 1992 United Nations Framework Convention on Climate Change⁴⁶ and the subsequent commitments under the 1997 Kyoto Protocol⁴⁷ have been implemented by some countries, but the United States has refused to ratify the

³⁶ Driesen, *supra* note 14, at 358.

³⁷ *Id.* at 360.

³⁸ *Id.* at 355.

³⁹ Convention for Protection of the Ozone Layer, *adopted* Mar. 22, 1985, 1513 U.N.T.S. 323 [hereinafter Vienna Convention]. *See also* Driesen, *supra* note 14, at 355.

⁴⁰ Vienna Convention, *supra* note 39, at 5.

⁴¹ *Id.* at 7. *See* SANDS, *supra* note 17, at 344.

⁴² Vienna Convention, *supra* note 39, at 3-5. *See* Driesen, *supra* note 14, at 355.

⁴³ Montreal Protocol on Substances that Deplete the Ozone Layer, *adopted* Sept. 16, 1987, 26 I.L.M. 1550.

⁴⁴ SANDS, *supra* note 17, at 346.

⁴⁵ *Id.*

⁴⁶ United Nations Framework Convention on Climate Change, *adopted* May 5, 1992, 1771 U.N.T.S. 107.

⁴⁷ Kyoto Protocol to the United Nations Framework Convention on Climate Change, *adopted* Dec. 10, 1992, 37 I.L.M. 22.

Kyoto Protocol despite being an early signatory to the agreement.⁴⁸ This is a significant failure, considering that the United States is the world's leading emitter of greenhouse gases.⁴⁹ The effectiveness of the commitments as a whole has been severely undermined by this failure.⁵⁰ Under the framework approach, there is always a chance that one country may fail to implement an agreement and thereby weaken the effectiveness of the majority's efforts.⁵¹ The failure to implement the Kyoto Protocol is also an example of increasing reluctance on the part of the United States to participate in international environmental treaties.⁵²

II. EUROPEAN REGULATIONS IN THE GLOBAL CONTEXT

In order to understand the proposed REACH regulation as it relates to international trade and the WTO agreements, it is necessary to have a general understanding of Europe's environmental regulations as well as the unique history and status of the European Union. The foundation of the modern European Union was laid shortly after World War II with the establishment of three different European treaties, precursors to the treaties establishing the union.⁵³ These treaties were implemented both to avoid the isolationist activities that had preceded the war and to establish a common market.⁵⁴ Subsequent acts retained and built upon the foundation of the three original treaties and ultimately led to the creation of the European Union of today.⁵⁵

⁴⁸ SANDS, *supra* note 17, at 346.

⁴⁹ *Id.*

⁵⁰ *Id.*

⁵¹ *Id.* at 357.

⁵² Christoforou, *supra* note 10, at 26.

⁵³ Treaty Establishing the European Coal and Steel Community, Apr. 18, 1951, 261 U.N.T.S. 140; Treaty Establishing the European Economic Community, Mar. 25, 1957, 298 U.N.T.S. 11 [hereinafter EEC Treaty]; Treaty Establishing the European Atomic Energy Community, Mar. 25, 1957, 298 U.N.T.S. 167. For a discussion on the role of these three treaties in the development of the European Union, see ANDREW EVANS, A TEXTBOOK ON EU LAW 1 (1998).

⁵⁴ EVANS, *supra* note 53.

⁵⁵ *Id.* at 2.

The European Union is a unique political entity. It is an organization of European countries working together and sharing institutions to which member states may delegate some of their sovereignty.⁵⁶ This allows the European Union to make decisions on certain matters of joint interest democratically at the European level.⁵⁷ These decisions are binding on member states.⁵⁸ The European Union is not intended to replace existing states, but the delegation of national sovereignty allows it to function for the states in some instances.⁵⁹ This capability distinguishes the E.U. from other international organizations.⁶⁰

The European Union functions to maintain an integrated European market by harmonizing national regulations.⁶¹ A primary principle of harmonization prohibits a country from arbitrarily restricting the import of goods, either expressly or by adoption of any rule that would have the effect of blocking trade.⁶² The European Union does, however, have an exception to this prohibition in cases in which the restriction is necessary for the protection of human health or the environment.⁶³ This exception is paralleled in the General Agreement on Tariffs and Trade, as discussed below.

⁵⁶ *E.g.*, Europa, How Does the Union Work?, http://www.europa.eu.int/abc/12lessons/index4_en.htm (last visited Feb. 6, 2006).

⁵⁷ *Id.*

⁵⁸ *Id.*

⁵⁹ *See id.*

⁶⁰ *Id.*

⁶¹ VOGEL, *supra* note 9, at 4.

⁶² Quantitative restrictions on imports and exports and any measures that will have an equivalent effect are prohibited between E.U. Member States by the Treaty Establishing the European Community. Treaty Establishing the European Community, arts. 28-29, Nov. 10, 1997, 1997 O.J. (C 340) 3 [hereinafter EC Treaty].

⁶³ Article 30 of the EC Treaty provides for an exception stating that

[t]he provisions of Articles 28 and 29 shall not preclude prohibitions or restrictions on imports, exports or goods in transit justified on grounds of . . . the protection of health and life of humans, animals or plants. . . . Such prohibitions or restrictions shall not, however, constitute a means of arbitrary discrimination or a disguised restriction on trade between Member States.

EC Treaty art. 30. *See* VOGEL, *supra* note 9, at 26.

The European Union is also distinctive because it is constantly evolving, both formally and informally.⁶⁴ On environmental issues, for example, the European Union has continued to broaden its power. This was evident in the Single European Act of 1987 (SEA), which specifically stated that one of its purposes was to improve the quality of the environment.⁶⁵ This purpose was effectuated by the Maastricht Treaty of 1993, the treaty that established the European Union.⁶⁶ The Maastricht Treaty extended the environmental objective of the SEA by requiring that a high level of environmental protection be integrated into other E.U. policies.⁶⁷ The Amsterdam Treaty of 1999 further effectuated the European Union's environmental objective by extending the E.U. Parliament's legislative powers over member states.⁶⁸

Effective integration of European law is based on the binding nature of E.U. regulations and directives.⁶⁹ A regulation differs from a directive in the degree of latitude member states are afforded in implementation. A regulation is "binding in its entirety and directly applicable in all member states,"⁷⁰ whereas a directive is binding only as to the result, permitting national authorities to choose the method used to achieve compliance.⁷¹

The evolving nature of the European Union stands in distinct contrast to the unchanging institutions of most other Western countries.⁷² By requiring that trade practices be evaluated in

⁶⁴ Gráinne De Búrca, *The Institutional Development of the EU: A Constitutional Analysis*, in *THE EVOLUTION OF EU LAW* 55 (Paul Craig & Gráinne De Búrca eds., 1999).

⁶⁵ Single European Act, art. 130r, Feb. 17, 1986, 1987 O.J. (L 169). See VOGEL *supra* note 9, at 26.

⁶⁶ Maastricht Treaty on European Union, Feb. 7, 1992, 1992 O.J. (C 191) [hereinafter Maastricht Treaty].

⁶⁷ *Id.* art. 130r2. See VOGEL, *supra* note 9, at 62-63.

⁶⁸ Treaty of Amsterdam Amending the Treaty on European Union, the Treaties Establishing the European Communities and Certain Related Acts, Oct. 2, 1997, 1997 O.J. (C 340) 1. See RALPH H. FOLSOM, *EUROPEAN UNION LAW IN A NUTSHELL* 29 (3d ed. 1999).

⁶⁹ EVANS, *supra* note 53, at 188 (discussing art. 189(4)).

⁷⁰ *Id.* at 189 (quoting art. 189(2)).

⁷¹ *Id.* at 189-90 (discussing art. 189(3)).

⁷² De Búrca, *supra* note 64, at 55.

light of any resultant long-term environmental effects, the European Union has expanded its traditional focus on maintaining a free and integrated market. While past E.U. regulations have acknowledged the interrelation between maintenance of a free market and environmental effects, the SEA and the Maastricht Treaty recognized environmental protection as a legitimate objective in its own right.⁷³

III. U.S. AND E.U. ENVIRONMENTAL POLICIES: A COMPARISON

In comparing the environmental policies of the United States and the European Union, scholars and commentators have generally recognized a divergence between their regulatory approaches, and have traced the basis for this divergence to conflicting shifts in the priorities of each government.⁷⁴ The European Union and the United States are the two most developed economic markets in the world.⁷⁵ Therefore, their inability to agree on a fundamental approach to environmental issues is a serious concern for environmental experts.⁷⁶ Some experts, however, argue that the schism is not as wide as is generally believed and that common ground exists.⁷⁷

The United States is generally characterized as employing a strict risk-assessment approach to environmental regulations.⁷⁸ Under strict risk assessment, a risk must first be quantified and then controlled.⁷⁹ European Union environmental regulations, however, are based on the precautionary principle, which is an expressly stated guiding principle for E.U. legislation.⁸⁰ A strict application of the precautionary principle requires regulatory action on the basis of less certainty than that which is required for

⁷³ VOGEL, *supra* note 9, at 60-62 (discussing SEA art. 100A).

⁷⁴ *E.g.*, GREEN GIANTS? ENVIRONMENTAL POLICIES OF THE UNITED STATES AND THE EUROPEAN UNION, *supra* note 10, at xi.

⁷⁵ *E.g.*, *id.* at 2.

⁷⁶ *Id.*

⁷⁷ Weiner, *supra* note 11, at 78-79.

⁷⁸ *Id.* at 82.

⁷⁹ *See id.*

⁸⁰ *Id.* at 81.

action in a strict risk-assessment approach.⁸¹ That is, precautionary action is proper even in the absence of an absolute, quantitative certainty of the risk.⁸²

A. EUROPEAN REGULATORY THEMES: THE PRECAUTIONARY PRINCIPLE

The European Union's emphasis on environmental issues, as embodied in the SEA and Maastricht Treaty, may be considered a manifestation of the precautionary principle. This principle is the primary guiding force in European environmental regulations.⁸³ The Maastricht Treaty specifically states that environmental action is to be based on the precautionary principle.⁸⁴ There are various statements of the principle itself, but a generally accepted version provides that "[w]hen an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not established scientifically. In this context the proponent of the activity, rather than the public, should bear the burden of proof."⁸⁵ The statements of the principle range from absolute bans on any potentially harmful activity, without consideration of associated costs,⁸⁶ to a more tempered approach that balances risks with costs but is nonetheless willing to impose restrictions without certainty of the potential for harm.⁸⁷ The European Union has employed the latter approach.

⁸¹ See Christoforou, *supra* note 10, at 18.

⁸² See *id.*

⁸³ EVANS, *supra* note 53, at 555-56.

⁸⁴ Maastricht Treaty, *supra* note 66, art. 130r2. See EVANS, *supra* note 53, at 556.

⁸⁵ INDUR M. GOKLANY, THE PRECAUTIONARY PRINCIPLE: A CRITICAL APPRAISAL OF ENVIRONMENTAL RISK ASSESSMENT 2 (2001) (quoting PROTECTING PUBLIC HEALTH & THE ENVIRONMENT: IMPLEMENTING THE PRECAUTIONARY PRINCIPLE 8 (Carolyn Raffensperger & Joel Tickner eds., 1999)).

⁸⁶ For example, the preamble of the Convention on Biological Diversity states "where there is a threat of significant reduction or loss of biological diversity, lack of full scientific certainty should not be used as a reason for postponing measures to avoid or minimize such a threat." Convention on Biological Diversity, *adopted* June 5, 1992, 1760 U.N.T.S. 79.

⁸⁷ The United Nations Framework Convention on Climate Change includes this statement as one of its guiding principles:

The Parties should take precautionary measures to anticipate, prevent or minimize the causes of climate change and mitigate its adverse effects.

In 2000, the European Commission released an explanation of its application of the precautionary principle, which stated that it is to be invoked only when "scientific evidence is insufficient, inconclusive, or uncertain and there are indications through preliminary objective scientific evaluation that there are reasonable grounds for concern that the potentially dangerous effects . . . may be inconsistent with the chosen level of protection."⁸⁸ The communication also states that the principle is to be considered "*within* a structured approach to the analysis of risk,"⁸⁹ and not, for example, as an alternative to risk assessment. The REACH program is an example of an application of the precautionary principle that incorporates risk assessment.

The European Commission's communication appears to have been intended to address the generally perceived incompatibility between the precautionary principle and a risk-assessment approach to environmental regulations, a subject of intense debate between environmentalists and policy makers. Environmentalists often point to failures of the risk-assessment approach, for example, in the cases of polychlorinated biphenyl (PCBs), dichlorodiphenyltrichloroethane (DDT), lead, and asbestos.⁹⁰ Chemical industry leaders, however, commonly assert that the precautionary principle does not justify the financial costs that result from action in the face of uncertainty.⁹¹

Where there are threats of serious or irreversible damage, lack of full scientific certainty should not be used as a reason for postponing such measures, taking into account that policies and measures to deal with climate change should be cost-effective so as to ensure global benefits at the lowest possible cost.

United Nations Framework Convention on Climate Change, *supra* note 46, art. 3.3.

⁸⁸ *Communication of the Commission on the Precautionary Principle*, at 10, COM (2000) 1 (Feb. 2, 2000).

⁸⁹ *Id.* at 3 (emphasis added).

⁹⁰ Eur. Env't Agency, *Late Lessons from Early Warnings: The Precautionary Principle 1896-2000*, at 179 (2001), available at http://reports.eea.eu.int/environmental_issue_report_2001_22/en/Issue_Report_No_22.pdf.

⁹¹ Am. Chemistry Council, *Science Based Decision Making and the Precautionary Approach*, Sept. 14, 2005, http://www.americanchemistry.com/s_acc/bin.asp?CID=428&DID=1489&DOC=FILE.PDF.

The precautionary principle is gaining increasing acceptance internationally, as evidenced by its inclusion in various environmental protocols that have had widespread support.⁹² Many environmental treaties have established obligations “in the face of scientific uncertainty and in the absence of an international consensus on the existence of environmental harm.”⁹³ For example, the principle was specifically incorporated in the 1992 Rio Declaration on Environment and Development,⁹⁴ and is also present in the 1987 Montreal Protocol and the 1997 Kyoto Protocol,⁹⁵ as well as the 1995 Straddling Stocks Agreement⁹⁶ and the 2000 Cartagena Protocol on Biosafety.⁹⁷ Some scholars have even suggested that the precautionary principle is so widely accepted internationally that it should be considered customary international law.⁹⁸ The acceptance of the precautionary principle as international customary law may affect the outcome of WTO adjudications, and is discussed below.

The arguments against application of the precautionary principle continue nonetheless. In addition to criticism based on trade implications, some disapprove of the principle based on fears that its application may impede technological progress that would ultimately result in risk reduction.⁹⁹ Others feel that certain actions may lead to both uncertain harms or uncertain benefits and that, therefore, a balancing approach would be more beneficial.¹⁰⁰ Still others feel that action in the face of uncertainty will create obstacles to innovation and experimentation.¹⁰¹

⁹² SANDS, *supra* note 17, at 6.

⁹³ *Id.*

⁹⁴ GOKLANY, *supra* note 85, at 4-5.

⁹⁵ SANDS, *supra* note 17, at 6.

⁹⁶ *Id.*

⁹⁷ *Id.*

⁹⁸ See Mystery Bridgers, *Genetically Modified Organisms and the Precautionary Principle: How the GMO Dispute Before the World Trade Organization Could Decide the Fate of International GMO Regulation*, 22 TEMP. ENVTL. L & TECH. J. 171, 184-85 (2004). Customary international law arises not from regulations or binding agreements, but from continued and widespread practice. *Id.*

⁹⁹ GOKLANY, *supra* note 85, at 3.

¹⁰⁰ *Id.* at 7.

¹⁰¹ Roger Scruton, *The Cult of Precaution*, NAT'L INT., Summer 2004, at 148, 150.

B. U.S. AND E.U. POLICIES: A TRUE DIVERGENCE?

The European Union and the United States are generally characterized as being on the opposite sides of a precautionary principle and risk assessment divide.¹⁰² The United States tends to disfavor restrictions in the absence of specific evidence showing a harmful effect and is often extremely critical of the precautionary approach.¹⁰³ The U.S. criticisms are based primarily on the concern that the application of the principle will significantly undermine global free trade.¹⁰⁴

The perception of divergence is supported by increasing U.S. resistance to the application of the precautionary principle in the international environmental treaties.¹⁰⁵ However, the United States has employed the precautionary approach on many occasions,¹⁰⁶ and the European Union specifically incorporates risk assessment into its application of the precautionary principle.¹⁰⁷ Therefore, the divergence between U.S. and E.U. approaches may not be as extensive or as extreme as it is sometimes supposed, and common ground does exist.¹⁰⁸

The argument for an articulable divergence between U.S. and E.U. policies is supported by the consideration of the changing roles of the United States and European Union in the context of environmental initiatives. In the 1970s and 1980s, the United States was a leader in establishing environmental policy.¹⁰⁹ Since the 1990s, however, the United States has retreated from this role and has become increasingly reluctant to commit to international environmental agreements.¹¹⁰ The European Union, in

¹⁰² *E.g.*, SANDS, *supra* note 17, at 7.

¹⁰³ *Id.*

¹⁰⁴ Mark Geistfeld, *Reconciling Cost-Benefit Analysis with the Principle that Safety Matters More than Money*, 76 N.Y.U. L. REV. 114, 174-75 (2001).

¹⁰⁵ Christoforou, *supra* note 10, at 27.

¹⁰⁶ *Id.* at 18-19.

¹⁰⁷ Wiener, *supra* note 11, at 86.

¹⁰⁸ *Id.* at 82.

¹⁰⁹ Norman J. Vig & Michael G. Faure, *Introduction to GREEN GIANTS*, *supra* note 10, at 1.

¹¹⁰ *Id.*

contrast, has committed itself to an increasingly high level of environmental protection and has been a leader in establishing international agreements.¹¹¹ Divergence is often illustrated, for example, by the European Union's express adoption of the precautionary principle and by the failure of the United States to implement the Kyoto Protocol on climate change.¹¹² The precautionary principle is often cited as an influencing factor in divergence of E.U. and U.S. policies, with the European Union relying on the precautionary approach more and more, while the United States has resisted the application of the principle.¹¹³

While the United States has expressly opposed the application of the precautionary principle in certain instances,¹¹⁴ it may be that U.S. resistance to the precautionary principle in the international context is based not on firm aversion to action in the face of uncertainty, but on an unwillingness to formally embrace the principle as a general guiding doctrine. The United States may be concerned that a full-scale acceptance of the precautionary principle would give other states more discretion to act in the absence of a certainty of risk, possibly to the detriment of the U.S. interests.¹¹⁵ In the alternative, U.S. resistance may be a defensive response to the growth of the European Union and its emergence as an international player with political and economic influence at a level on par with that of the United States.¹¹⁶

Despite its criticism of the use of the precautionary principle in the international context, the United States has invoked the precautionary principle, in spirit if not in name, to address certain domestic concerns. For example, the Delaney Clause of the U.S. Federal Food, Drug and Cosmetic Act of 1958 banned any food additive that was shown to cause cancer, regardless of the magnitude of the dose required.¹¹⁷ In addition, the Clean Air Act

¹¹¹ *Id.*

¹¹² Wiener, *supra* note 11, at 74.

¹¹³ Christoforou, *supra* note 10, at 18.

¹¹⁴ Wiener, *supra* note 11, at 81.

¹¹⁵ Christoforou, *supra* note 10, at 27.

¹¹⁶ Wiener, *supra* note 11, at 82.

¹¹⁷ GOKLANY, *supra* note 85, at 4; Eur. Env't Agency, *supra* note 90, at 12. The Delaney Clause has been criticized as impractical and unnecessary, especially as technological advances have allowed for more precise evaluation of cancer risks. Andrew J. Miller, Note, *The Food Quality Protection Act of 1996: Science and*

of 1970 established air quality standards that were to be implemented by a certain date without consideration of economic costs.¹¹⁸ U.S. courts have also upheld precautionary measures even in light of scientific uncertainty.¹¹⁹ Recently, the United States has invoked precautionary measures in the war on terror by adopting a policy of action even in the case of uncertain threats that are not yet fully materialized.¹²⁰

Each of the examples listed above is an instance in which the United States engaged in restrictive action despite a lack of conclusive scientific evidence of risk;¹²¹ taken as a whole, these examples suggest that the United States opposes the adoption of a precautionary *principle* as a guiding force in policy development, not the application of precautionary *measures*.¹²² Thus, the theory of divergence does not satisfactorily reconcile all the sometimes conflicting and sometimes complementary policies of the United States and European Union.

Convergence is an alternative theory that explains the cases of certain risks to which the United States had, in the past, applied a more precautionary approach than the European Union, but to which the current approach of both the European Union and the United States is similar.¹²³ Examples include the U.S.

Law at a Crossroads, 7 DUKE ENV. L & POL'Y F. 393, 396 (1997). Congress has tempered its effect in several cases. The Food Quality and Protection Act of 1996 removed pesticide residues from regulation under the Delaney Clause and thereby greatly limited its scope. *Id.* In addition, Congress responded to consumer demand for saccharin by specifically allowing its use in food products despite a known risk of cancer. Mara A. Michaels, Comment, *FDA Regulation of Health Claims Under the Nutrition Labeling and Education Act of 1990: A Proposal for a Less Restrictive Scientific Standard*, 44 EMORY L.J. 319, 334 (1995).

¹¹⁸ Pub. L. No. 91-604, 84 Stat. 1676 (codified at 42 U.S.C. § 7401 *et seq.* (2000)); GOKLANY, *supra* note 85, at 4.

¹¹⁹ Christoforou, *supra* note 10, at 23 (noting that in *Maine v. Taylor*, 477 U.S. 131, 148-49 (1986), the U.S. Supreme Court held that a state "has a legitimate interest in guarding against imperfectly understood risks, despite the possibility that they may ultimately prove to be negligible.").

¹²⁰ Wiener, *supra* note 11, at 92.

¹²¹ Christoforou, *supra* note 10, at 18-19.

¹²² *Id.* at 27.

¹²³ Wiener, *supra* note 11, at 91.

ban on chlorofluorocarbons and the phase-out of lead in gasoline, each of which was adopted years before E.U. action, but to which the European Union has largely converged.¹²⁴

Another notable example of convergence is the current E.U. system for regulation of chemicals, which the REACH program was developed to replace. The current E.U. regulatory scheme was based on the U.S. Toxic Substances Control Act (TSCA).¹²⁵ When TSCA was passed in 1976, it was strongly opposed by European industry groups, who feared it would have a major impact on their ability to export to the United States.¹²⁶ In 1978, European countries came together to work with the United States to develop “parallel” legislation.¹²⁷ The current debate over REACH mirrors the debate that occurred over TSCA.¹²⁸ The fact that the European Union and the United States have switched sides in the debate seems indicative of divergence, but the fact that the two powers were able to work together in the past should be seen a positive factor supporting possible convergence of policies in the case of REACH.

Another theory used in comparing U.S. and E.U. policies is the hybridization theory, which recognizes that the interactions between the United States and the European Union are too complex to be characterized by the simplistic ideas of divergence or convergence.¹²⁹ The hybridization theory recognizes that both divergence and convergence are occurring, and that “both systems are borrowing legal concepts from each other in a complex and continuous mutual evolution.”¹³⁰ Hybridization involves the borrowing of legal ideas and tools, and has been seen in European borrowing of U.S. approaches to emissions trading and in U.S. borrowing of the Dutch method of environmental covenants.¹³¹

¹²⁴ *Id.*

¹²⁵ Pub. L. 94-469, 90 Stat. 2003 (codified at 15 U.S.C. §§ 2601-2692 (2000)).

¹²⁶ VOGEL, *supra* note 9, at 79-80.

¹²⁷ *Id.* at 80.

¹²⁸ *EU, U.S. Stakeholders Debate REACH*, PESTICIDE & TOXIC CHEM. NEWS, May 3, 2004, at 7.

¹²⁹ Wiener, *supra* note 11, at 74.

¹³⁰ *Id.* at 74-75.

¹³¹ *Id.* at 98.

Further, the apparent discord between the United States and the European Union may arise not simply from the fact that precautionary measures are being applied, but rather from the risks to which each government has applied them.¹³² For example, while the European Union has taken an approach more precautionary than the United States on risks related to genetically modified foods and toxic substances, the United States has been more precautionary in its approach to risks related to bovine spongiform encephalopathy (BSE, or "mad cow" disease) and to risks related to air pollution caused by fine particulate matter.¹³³

The foregoing examples highlight the historical and ongoing interrelation of E.U. and U.S. environmental policy. Regardless of the characterization of the differences between U.S. and E.U. policies, and even if these differences are not as great as some perceive, experts agree that the differences that do exist must be addressed and minimized in order to effectively confront international environmental issues.¹³⁴ Recognition of both the differences and similarities between U.S. and E.U. regulatory policies should be a starting point for mutual understanding and compromise in debates over environmental regulation such as REACH.¹³⁵

C. THE NEED FOR AN ALTERNATIVE RESOLUTION TO INTERNATIONAL ENVIRONMENTAL ISSUES

The ability of the United States and the European Union to work together, as they had previously in the case of TSCA, is, as stated above, a positive factor. However, while the REACH situation is similar to that in which the controversy over TSCA arose, the international relationship between the United States and the European Union is quite different today, and a mutual understanding regarding REACH seems unlikely. When TSCA was introduced, the European Union did not exist as a political entity, and the European coalition did not rival the United States

¹³² *Id.* at 91.

¹³³ *Id.* at 90; Katherine Harding, *Test Confirms Dairy Cow had Brain-Wasting Disease*, GLOBE AND MAIL (Toronto), Jan. 3, 2005, at A1 (reporting that in May 2003, the United States banned the import of Canadian beef after the discovery of a single case of mad cow disease in a cow born in Alberta, Canada).

¹³⁴ Christoforou, *supra* note 10, at 41; Wiener, *supra* note 11, at 100.

¹³⁵ Wiener, *supra* note 11, at 73.

in terms of political or economic influence. Today, the E.U. economy is almost equal in size to that of the United States.¹³⁶ More importantly, the United States today, unlike the European Union at the time of TSCA, seems unwilling to be a party to multilateral environmental agreements and has recently advanced an environmental agenda that is largely at odds with that of the European Union.¹³⁷ This disparity may be based on the differing E.U. and U.S. perceptions of globalization.¹³⁸ The United States tends to view globalization concerns as relating primarily to free trade, while the European Union sees global environmental issues and global trade issues as equally important globalization concerns.¹³⁹

Although the European Union has welcomed comments regarding the REACH program and has made substantial changes to the proposed regulation based on these comments, many parties continue to voice opposition, primarily based on trade concerns.¹⁴⁰ It seems very likely that this dispute will ultimately have to be resolved under the WTO agreements. When one or more WTO member nations suspect that another member nation's environmental regulation is being used to influence international trade, the WTO is the only forum available to resolve the dispute. The evolution of WTO decisions demonstrates the increasing willingness of the WTO, particularly of the Appellate Body, to reconcile apparent conflicts between member nations by fashioning resolutions with broad political support.¹⁴¹ At the same time, Appellate Body decisions have become more deferential to member nations' environmental concerns.¹⁴² The evolving and increasingly deferential nature of these decisions, coupled with the increasing ineffectiveness of international environmental

¹³⁶ Vig & Faure, *supra* note 109, at 3.

¹³⁷ *See id.* at 2.

¹³⁸ Ludwig Krämer, *The Roots of Divergence: A European Perspective, in GREEN GIANTS? ENVIRONMENTAL POLICIES OF THE UNITED STATES AND THE EUROPEAN UNION*, *supra* note 10, at 53, 66.

¹³⁹ *Id.*

¹⁴⁰ American Chamber of Commerce to the European Union et al., AmCham EU-CEPIC-FECC Discussion Paper on the Trade Impact of REACH, Nov. 30, 2004, <http://www.fecc.org/docs/Trade%20Impact%20of%20REACH%20Final.pdf>.

¹⁴¹ Knox, *supra* note 19, at 3.

¹⁴² *Id.* at 59.

treaties, makes the WTO the most effective forum for resolution of international environmental conflicts.

IV. REACH: THE PROGRAM

A. BACKGROUND AND GOALS

The REACH proposal arose from a growing concern about the unknown effects of chemical use.¹⁴³ For example, it has been shown that toxic chemicals present in common products, while not causing immediate detriment to users, do accumulate in the bodies of humans and animals.¹⁴⁴ The consequences of this accumulation are not known.¹⁴⁵ REACH is intended to close this knowledge gap.¹⁴⁶ The main goals of the program, as outlined by the European Commission, include protection of human health and the environment, maintenance and enhancement of the competitiveness of the E.U. chemical industry, improved risk assessment, integration with international efforts, and conformity with WTO obligations.¹⁴⁷ The regulation was proposed in October 2003 and passed a first reading in the European Parliament on November 17, 2005.¹⁴⁸ The European Council reached a political agreement on December 13, 2005,¹⁴⁹ and final approval of the regulation is expected by early 2007.¹⁵⁰ Evaluation of the program under the WTO requires an examination of the specific requirements of the program, the intended purpose, and the likely effects of implementation, both intentional and inadvertent.

¹⁴³ Ford, *supra* note 6.

¹⁴⁴ Margot Wallström, Member Responsible for Env't, Eur. Comm'n, Beyond REACH, Address at European Voice Conference (Mar. 31, 2003), *available at* <http://europa.eu.int/rapid/pressReleasesAction.do?reference=SPEECH/03/169&format=HTML&aged=0&language=EN&guiLanguage=EN>.

¹⁴⁵ *Id.*

¹⁴⁶ *Id.*

¹⁴⁷ EC News Release, *supra* note 4.

¹⁴⁸ Europa, The New EU Chemicals Regulation — REACH, at http://europa.eu.int/comm/enterprise/reach/index_en.htm (Apr. 4, 2006).

¹⁴⁹ Euractiv.com, Ministers Soft on Substitution Rules for Chemicals, at <http://www.euractiv.com/Article?tmuri=tcm:29-150858-16&type=news> (Dec. 13, 2005).

¹⁵⁰ Euractiv.com, *supra* note 5.

B. PROGRAM REQUIREMENTS

The program aims to shift the responsibility to ensure the safety of chemicals from government to industry.¹⁵¹ Companies producing or importing chemicals must assess the risks arising from their use and take action to manage any demonstrated risks.¹⁵² There are three levels of assessment: registration, evaluation, and authorization.¹⁵³ The level of assessment required varies both with the volume manufactured or imported per year by each manufacturer or importer and with the degree of risk associated with each chemical.¹⁵⁴ All chemicals would require registration and evaluation, while only substances of high concern would be subject to authorization.¹⁵⁵

Several elements of the program relate to registration matters. Chemicals manufactured or imported in quantities of more than one metric ton must be registered in a central database.¹⁵⁶ Each manufacturer and importer must submit its own registration detailing the substance's properties, intended uses, likely exposure scenarios, potential risks to health and the environment, and how those risks are to be managed.¹⁵⁷ Existing data, if available, may be submitted.¹⁵⁸ More information will be required for substances with high production volumes and for those posing relatively higher risks.¹⁵⁹ The safety information gathered during registration will be passed down the supply chain to those who use the chemicals as an end product or in the manufacture of other products.¹⁶⁰ According to the European Commission, 80 percent of substances will require no further action beyond registration.¹⁶¹ Substances manufactured or imported in quantities of

¹⁵¹ EC News Release, *supra* note 4.

¹⁵² *Id.*

¹⁵³ *Id.*

¹⁵⁴ *Id.*

¹⁵⁵ *Id.*

¹⁵⁶ *Id.*

¹⁵⁷ Wallström, *supra* note 144.

¹⁵⁸ EC News Release, *supra* note 4.

¹⁵⁹ *Id.*

¹⁶⁰ *Id.*

¹⁶¹ *Id.*

less than one metric ton will not require registration.¹⁶² Non-isolated intermediates are fully exempt from the program, while polymers are exempt from registration and evaluation.¹⁶³ Substances used in research and development are exempt from registration for five years, an exemption that is renewable for an additional five years.¹⁶⁴

If, based on the registration, a substance generates a concern that its use poses a risk to health or the environment, public authorities will request further information before granting approval.¹⁶⁵ Substances of very high concern will require authorization for each proposed use.¹⁶⁶ The authorization procedure is based on risk assessment and requires the manufacturer or importer to show that the risks can be adequately controlled *or* that the social and/or economic benefits of the use outweigh the risks.¹⁶⁷ If such a showing is not made, the use of these substances will not be authorized.¹⁶⁸ The Commission has identified carcinogenic and bio-accumulative substances as examples of those that will require authorization.¹⁶⁹

C. COSTS AND BENEFITS

The European Commission estimates the direct cost of REACH at \$4 billion, and indirect costs at \$15 billion to \$30 billion.¹⁷⁰ Other cost estimates range up to ten times the amount of the Commission estimate.¹⁷¹ However, it has been asserted that these estimates were based on outdated versions of REACH and are, therefore, inaccurate.¹⁷² Although total health benefits are difficult to calculate, E.U. estimates range from the \$20 billion to

¹⁶² *Id.*

¹⁶³ *Id.*

¹⁶⁴ *Id.*

¹⁶⁵ *Id.*; Wallström, *supra* note 144.

¹⁶⁶ EC News Release, *supra* note 4.

¹⁶⁷ *Id.*

¹⁶⁸ *Id.*

¹⁶⁹ *Id.*

¹⁷⁰ DiGangi, *supra* note 7, at 21.

¹⁷¹ Ford, *supra* note 6.

¹⁷² Alex Scott, *REACH Opposition Based on "Exaggerated" Claims*, CHEMICAL WEEK, Apr. 21, 2004.

\$50 billion for occupational health benefits alone.¹⁷³ The World Wildlife Fund estimates total health benefits at \$180 billion.¹⁷⁴ A study conducted by independent researchers at the request of the European Commission evaluated the benefits of REACH based only on human exposure to environmental chemicals and not, for example, direct exposure to chemicals by consumers or workers.¹⁷⁵ The study estimates a cost benefit of _150 – 500 million by 2017.¹⁷⁶

D. REACH COMPARED TO CURRENT E.U. CHEMICAL REGULATIONS

The REACH program will replace forty current directives and regulations¹⁷⁷ that the European Commission has characterized as “largely unable to identify risks” and “slow to act where risks have been established.”¹⁷⁸ Margot Wallström, E.U. Environment Commissioner, described the new system as

a radical paradigm shift, which breaks with the past: In the future; the chemicals industry will be responsible for generating and providing the necessary information about their own products in line with corporate responsibility. Not—as it is today—the public authorities having to prove that a chemical is hazardous.¹⁷⁹

The failure of the current system to identify risk is based in large part on its distinction between “new” and “existing” chemicals.¹⁸⁰ New chemicals—those introduced after 1981—must be

¹⁷³ DiGangi, *supra* note 7.

¹⁷⁴ *Id.*

¹⁷⁵ Euractiv.com, New Study Environment and Health Benefits of REACH (Feb. 16, 2006), <http://www.euractiv.com/Article?tcmuri=tcm:29-152690-16&type=news>.

¹⁷⁶ *Id.*

¹⁷⁷ EC News Release, *supra* note 4.

¹⁷⁸ *Id.*

¹⁷⁹ Wallström, *supra* note 144.

¹⁸⁰ EC News Release, *supra* note 4.

tested, but existing chemicals are not covered by these provisions.¹⁸¹ Public authorities *may*, however, evaluate existing substances if it is deemed necessary.¹⁸² This distinction between new and existing substances leaves many chemicals wholly unregulated and places the burden on the government for any evaluation that does occur.¹⁸³ Of the over one hundred thousand substances "existing" in 1981, only one hundred forty high-volume substances have been determined to require risk assessment.¹⁸⁴ Of these, only a few have completed the process.¹⁸⁵

Reaction to REACH has been mixed, even within the European Union. For example, some E.U. members have praised the program as a necessary improvement over current regulations.¹⁸⁶ The European Chemical Industry Council, however, opposes it.¹⁸⁷ The U.S. chemical industry has also opposed the program, while environmental groups such as the World Wildlife Fund have supported it.¹⁸⁸ The fact that both the U.S. and E.U. chemical industries oppose the program suggests that opposition follows industry, not national, boundaries. Opposition has been based on several grounds, including arguments that the scheme is overly complex, that it will stifle innovation, and that it contravenes the European Union's obligations under the agreements of the WTO.¹⁸⁹ Although discussed in greater detail below, it should be noted here that the European Union has significantly modified the initial REACH proposal based on feedback received during the public comment period,¹⁹⁰ a requirement under the WTO Agreement on Technical Barriers to Trade.¹⁹¹ Changes

¹⁸¹ *Id.*

¹⁸² *Id.*

¹⁸³ DiGangi *supra* note 7, at 20.

¹⁸⁴ *Id.*

¹⁸⁵ *Id.*

¹⁸⁶ Press Release, Gov't Offices of Swed., Chemicals Policy in Swed, the EU, and Globally (Oct. 13, 2004), available at <http://www.sweden.gov.se/sb/d/2969/a/17212>.

¹⁸⁷ Ford, *supra* note 6.

¹⁸⁸ *Id.*

¹⁸⁹ DiGangi, *supra* note 7, at 23.

¹⁹⁰ EC News Release, *supra* note 4.

¹⁹¹ Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, Legal Instruments—Results of the Uruguay Round, 33 I.L.M. 1125 [hereinafter TBT].

include the exemption of polymers from regulation and evaluation requirements, increased confidentiality, and fewer registration requirements for low-volume substances.¹⁹² Opposition continues, however, despite recognition that the final REACH proposal represented significant concessions.¹⁹³ Following the release of the final proposal, the U.S. government met with the WTO Technical Barriers to Trade committee to discuss the program.¹⁹⁴ Representatives from the European Commission defended REACH before the same committee in November 2004.¹⁹⁵ This is a very strong indication that a formal challenge under the Technical Barriers to Trade Agreement will follow the implementation of REACH.

V. THE WORLD TRADE ORGANIZATION: BALANCING NATIONAL ENVIRONMENTAL REGULATIONS AND INTERNATIONAL TRADE

Increasing globalization is a substantial feature of today's economic and social structure. Geographic limitations on trade, communication, and travel have diminished considerably in the past half-century. International trade in particular has become not only possible, but necessary, to the maintenance of the world economy. International commerce allows all countries to acquire better products through trade.¹⁹⁶ The free flow of trade increases competition and provides motivation for continuous product improvement.¹⁹⁷

Trade policy and environmental policy, while once distinct, are becoming increasingly interrelated.¹⁹⁸ The increase in national environmental regulations, coupled with reduction in trade

¹⁹² EC News Release, *supra* note 4.

¹⁹³ DiGangi, *supra* note 7, at 25.

¹⁹⁴ Maureen Conley, *Senators Question USTR's Opposition to REACH*, PESTICIDE & TOXIC CHEMICAL NEWS, July 12, 2004, at 4.

¹⁹⁵ World Trade Organization, Committee on Technical Barriers to Trade - Minutes of the Meeting of 4 November 2004 - Note by the Secretariat, G/TBT/M/34. See Response From the European Communities to Comments Submitted by WTO Members Under G/TBT/N/EEC/52, http://europa.eu.int/comm/enterprise/reach/docs/reach/reach_presentation_tbt_meeting_041104.pdf.

¹⁹⁶ *Id.*

¹⁹⁷ *Id.*

¹⁹⁸ VOGEL, *supra* note 9, at 1.

restrictions, particularly tariffs, has led to the increased recognition of the potential use of environmental regulations as non-tariff barriers to trade.¹⁹⁹ While international law has moved toward the integration of economic and environmental aspects,²⁰⁰ many import restrictions are imposed unilaterally by a single country in the absence of international agreements.²⁰¹ The proposed REACH regulation is one example of a regulation that unilaterally restricts imports. Restrictions of this type must be considered under the obligations established by the General Agreement on Tariffs and Trade and the World Trade Organization.²⁰²

The GATT became effective in 1948²⁰³ as an agreement intended to encourage trade among its member states.²⁰⁴ A major renegotiation of the agreement began in 1986 and ultimately led to the establishment of the World Trade Organization in 1995.²⁰⁵ The WTO replaced the GATT as an international agreement, but the GATT still remains as the umbrella treaty for trade in goods.²⁰⁶ Thus, any action by a member of the WTO must not only comply with WTO agreements, but must also be considered under the overriding principles of the GATT.

A. THE WTO AGREEMENTS

1. Generally

Membership in the WTO is based on negotiation, through which each member country commits to open its market to all member countries and to honor WTO commitments.²⁰⁷ In return, each member is ensured the same treatment by other member

¹⁹⁹ *Id.*

²⁰⁰ SANDS, *supra* note 17, at 940.

²⁰¹ *Id.* at 946.

²⁰² *See id.*

²⁰³ UNDERSTANDING THE WTO, *supra* note 18, at 9.

²⁰⁴ SANDS, *supra* note 17, at 947.

²⁰⁵ Final Act Embodying the Results of the Uruguay Round of Multilateral Trade Negotiations, Apr. 15, 1994, 33 I.L.M. 1125 (1994) [hereinafter WTO Agreement]. *See* UNDERSTANDING THE WTO, *supra* note 18, at 18-19.

²⁰⁶ UNDERSTANDING THE WTO, *supra* note 18, at 20.

²⁰⁷ *Id.* at 107.

nations.²⁰⁸ The purpose of the WTO is to provide guidelines designed to limit trade barriers and to help maintain a free system of trade.²⁰⁹ There are two basic principles on which specific WTO agreements are based: most-favored-nation treatment and national treatment.²¹⁰ Most-favored-nation treatment prohibits member nations from discriminating between trading partners.²¹¹ That is, each member nation must be afforded most-favored-nation status.²¹² National treatment requires equal treatment for both imported goods and goods produced domestically.²¹³ Other important goals of the WTO agreements include lowering trade barriers, increasing predictability and transparency, promoting fair competition, and encouraging growth in less-developed nations.²¹⁴

Member nations also acquire the benefit of resolving disputes with other members through the WTO dispute resolution system, which includes the Dispute Settlement Body (DSB) and the Appellate Body.²¹⁵ The DSB consists of representatives of every member state.²¹⁶ The dispute process begins with a consultation between the disputing parties.²¹⁷ If the parties are unable to reach a resolution, the DSB appoints a panel of experts to hear the dispute and to make a ruling or recommendation.²¹⁸ The DSB can reject a panel recommendation only by consensus.²¹⁹ Thus, a panel report will automatically be adopted unless there is

²⁰⁸ *Id.*

²⁰⁹ *Id.* at 8.

²¹⁰ *Id.* at 10.

²¹¹ *Id.*

²¹² *Id.*

²¹³ *Id.*

²¹⁴ *Id.* at 11-12.

²¹⁵ Understanding on Rules and Procedures Governing the Settlement of Disputes, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, Legal Instruments—Results of the Uruguay Round, 33 I.L.M. 1125 (1994). UNDERSTANDING THE WTO, *supra* note 18, at 57.

²¹⁶ DAVID PALMETER & PETROS C. MAVROIDIS, DISPUTE SETTLEMENT IN THE WORLD TRADE ORGANIZATION: PRACTICE AND PROCEDURE 15 (2d ed. 2004).

²¹⁷ UNDERSTANDING THE WTO, *supra* note 18, at 56.

²¹⁸ *Id.* at 57-58.

²¹⁹ PALMETER & MAVROIDIS, *supra* note 216, at 15.

consensus to the contrary.²²⁰ Either party in a dispute may appeal the panel's ruling on issues of law only.²²¹ Appeals are heard by members of the permanent Appellate Body of the DSB.²²² As with DSB panel recommendations, the Appellate Body's report may only be rejected by consensus.²²³

2. *Specific WTO Agreements for Trade in Goods*

The structure of the agreements for trade in goods begins with the broad principles of the GATT.²²⁴ Specific WTO agreements address issues unique to various sectors of trade, such as standards and safety.²²⁵ These specific agreements go beyond, and are in addition to, the requirements of GATT and should be examined first, followed by consideration of the GATT requirements.²²⁶ This discussion will focus on the standards and safety agreement relating to trade in goods—the Technical Barriers to Trade Agreement (TBT Agreement).²²⁷

3. *Technical Barriers to Trade Agreement*

The purpose of the TBT Agreement is to ensure that a member nation's regulations, standards, and testing and certification procedures do not function as unnecessary obstacles to trade.²²⁸ The agreement indicates the WTO's recognition that disparate national standards may have the effect of discouraging

²²⁰ *Id.*

²²¹ UNDERSTANDING THE WTO, *supra* note 18, at 57.

²²² *Id.*

²²³ *Id.*

²²⁴ *Id.* at 22.

²²⁵ For example, technical product standards relating to trade in goods are addressed under the Agreement on Technical Barriers to Trade, TBT Agreement; Food safety standards are addressed in the Agreement on the Application of Sanitary and Phytosanitary Measures Agreement, Agreement on the Application of Sanitary and Phytosanitary Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, Legal Instruments—Results of the Uruguay Round, 33 I.L.M. 1125 (1994) [hereinafter SPS]; UNDERSTANDING THE WTO, *supra* note 18, at 22.

²²⁶ WORLD TRADE ORG., WTO ANALYTICAL INDEX: GUIDE TO WTO LAW AND PRACTICE 532-33 (2003) [hereinafter WTO ANALYTICAL INDEX].

²²⁷ TBT Agreement. See UNDERSTANDING THE WTO, *supra* note 18, at 30-31.

²²⁸ UNDERSTANDING THE WTO, *supra* note 18, at 30-31.

trade between member nations.²²⁹ Moreover, if such standards are set arbitrarily under the guise of health and safety, they may be used in a protectionist manner in contravention with the principles of the WTO.²³⁰ However, the agreement specifically provides in the preamble that

no country should be prevented from taking measures necessary . . . for the protection of human, animal, or plant life or health, or the environment . . . at levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries . . . or a disguised restriction on trade.²³¹

Thus, the TBT Agreement specifically allows for regulations aimed at protecting health and the environment provided that they are applied uniformly.

The agreement requires that technical regulations not be prepared, adopted, or applied with the purpose or effect of creating unnecessary obstacles to trade.²³² Regulations may “not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create.”²³³ The agreement also lists examples of objectives that may be considered legitimate. They include the “protection of human health or safety, animal or plant life or health, or the environment.”²³⁴ The agreement also provides relevant considerations when assessing risks. They include “available scientific and technical information, related processing technology, or intended end-uses of products.”²³⁵

The TBT Agreement also imposes a notice requirement on any member nation proposing a technical regulation that will significantly affect other members.²³⁶ At an early stage, the proposing member must publish notice of the regulation and of the

²²⁹ *Id.*

²³⁰ *Id.*

²³¹ TBT Agreement pmb1.

²³² *Id.* art. 2.2.

²³³ *Id.*

²³⁴ *Id.*

²³⁵ *Id.*

²³⁶ *Id.* art. 2.9.

products to be covered. The proposing member must also allow for comments from potentially affected members and must take these comments into account before implementing the proposed regulation.²³⁷ It is significant to note that there is little jurisprudence relating to the TBT Agreement. However, the TBT language tracks the language of the WTO Sanitary and Phytosanitary Measures Agreement (SPS Agreement), an agreement which has been adjudicated more frequently.²³⁸ The similarity in language indicates that SPS decisions may be predictive of the outcome of future TBT disputes.

In addition to the specific WTO agreements for trade in goods, the preamble to the agreement establishing the WTO recognizes the need to consider environmental consequences of economic policies.²³⁹ It has been invoked in environmental adjudications in which the Appellate Body emphasized the autonomy of WTO members in determining their own policies and objectives.²⁴⁰

4. *Environmental Issues and the GATT*

As previously noted, unilateral environmental measures must be evaluated under both the appropriate WTO agreement and the broad principles of the GATT. Environmental disputes will generally require consideration under GATT Articles III and XX. GATT Article III prohibits the application of regulations or requirements to domestic or imported goods in a way that unfairly or unjustifiably protects domestic products.²⁴¹ Article III (4) requires that imports from a member nation "be accorded treatment no less favorable than that accorded to like products of national origin."²⁴² The continuing importance of Article III remains unclear, however, because the national treatment requirements it sets forth have largely been incorporated into the TBT Agreement.

²³⁷ *Id.* art. 2.9.4.

²³⁸ Compare TBT with SPS.

²³⁹ WTO Agreement pmbl.

²⁴⁰ *Id.*

²⁴¹ *Id.* art. III.

²⁴² *Id.*

GATT Article XX list two relevant exemptions for regulations that would otherwise fail to meet the requirements of GATT Article III or of the TBT Agreement. Article XX (b) provides for an exemption from normal GATT requirements for policies that are “necessary to protect human, animal, or plant life or health.”²⁴³ Article XX (g) provides the same exemption for policies relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.²⁴⁴ Each exemption must be considered in conjunction with the chapeau of Article XX, which provides that measures falling under an Article XX exemption must “not [be] applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade.”²⁴⁵ The Article XX exemption parallels a similar exception in E.U. regulations that is applicable to individual E.U. nations acting within the E.U., as discussed above.

5. *WTO Disputes and Decisions*

Reports of the WTO’s Dispute Settlement Body are binding only as to the parties to the dispute, and there is no formal doctrine of stare decisis requiring subsequent panels to follow prior holdings.²⁴⁶ It is well established, however, that “the basis by which panels and the Appellate Body decide cases is substantially formulated on precedents.”²⁴⁷ GATT reports are similarly viewed as persuasive authority in deciding WTO disputes.²⁴⁸ Because the GATT was the basis for the establishment of the WTO, it is appropriate to consider both GATT and WTO decisions as constituting interrelated bodies of law. Another frequently influential factor in WTO decisions is customary international law,

²⁴³ General Agreement on Tariffs and Trade art. XX (b), Oct. 30, 1947, 61 Stat. A-11, A-61, 55 U.N.T.S. 194, 262 [hereinafter GATT].

²⁴⁴ *Id.* art. XX (g).

²⁴⁵ *Id.* art. XX.

²⁴⁶ PALMETER & MAVROIDIS, *supra* note 216, at 56.

²⁴⁷ *Id.* (quoting MITSUO MATSUSHITA, 5 SELECTED GATT/WTO PANEL REPORTS: SUMMARIES AND COMMENTARIES ix (1999)).

²⁴⁸ *Id.* at 52-55.

which arises from the continued and widespread practice of a legal concept.²⁴⁹

As in any body of law, prior DSB decisions inform the parties' expectations when drafting new regulations,²⁵⁰ and any departure from the expected result must be clearly supported by the deciding body.²⁵¹ While departures from precedent are not to be approached lightly, the body of WTO case law demonstrates the evolving and adaptive nature of the WTO. The WTO is fundamentally an agreement between members, and it is charged with representing and balancing the interests of all parties. The WTO, therefore, must be responsive to the interests of its member states, and ideally, its decisions should evolve with the views of its members.

An example of this responsiveness and evolution is demonstrated by a review of selected GATT and WTO disputes, beginning with the GATT's 1991 holding in the *Tuna-Dolphin* dispute. The *Tuna-Dolphin* decision drew much criticism from environmentalists, who predicted that an increasing number of environmental laws would be held to violate the WTO agreements.²⁵² A review of subsequent decisions shows, however, that the most controversial elements of the *Tuna-Dolphin* decision were ultimately overturned, and that the WTO Appellate Body has increasingly declined to hold that environmental laws conflict with trade agreements.²⁵³

a. Controversial Beginnings: The Tuna-Dolphin Dispute

In 1991, Mexico initiated a GATT challenge of two U.S. requirements relating to the import of tuna: (1) that any country exporting tuna to the United States prove that it met the U.S. dolphin protection standards in its harvesting of tuna, and (2) that the tuna be labeled "dolphin-safe."²⁵⁴ The GATT panel first

²⁴⁹ See Bridgers, *supra* note 98, at 185.

²⁵⁰ PALMETER & MAVROIDIS, *supra* note 216, at 55-56.

²⁵¹ *Id.* at 57.

²⁵² KNOX, *supra* note 19, at 3.

²⁵³ *Id.*

²⁵⁴ Panel Report, *United States – Restrictions on Imports of Tuna*, DS21/R (Sept. 3, 1991), GATT B.I.S.D. (39th Supp.) at 155; SANDS, *supra* note 17, at 954-55.

analyzed the requirement of compliance with the dolphin-protection standards under the Article III (4) requirement that regulations must not unfairly protect domestic products.²⁵⁵ The panel found that, although the same standard applied to both domestic and imported goods, the standard related to the tuna-harvesting *process* and not the product itself.²⁵⁶ The United States was required to treat imported Mexican tuna no less favorably than U.S. tuna, without consideration of the process by which the tuna are harvested.²⁵⁷ The panel further held that the ban on Mexican tuna was not justified under either Article XX (b) or XX (g), reasoning that these provisions may be used only to regulate activities within a country's jurisdiction.²⁵⁸ The panel concluded by stating that, even if a country could impose its process-related regulations outside its jurisdiction, the U.S. requirements in question would not qualify for the Article XX exemptions because the ban was not "necessary" for the protection of health nor was it "primarily aimed at" the conservation of dolphins.²⁵⁹

The response from environmentalists following this decision was pessimistic.²⁶⁰ Many thought that the decision established a precedent under which environmental regulations would increasingly be held inconsistent with trade agreements.²⁶¹ Environmentalists, therefore, urged that trade agreements be reformed to specifically protect the environment, while still maintaining a system of free trade.²⁶² While these reform efforts were not successful, the feared result did not come to pass, and the WTO ultimately overturned most of the specific holdings of the *Tuna-Dolphin* decision.²⁶³

²⁵⁵ Cf. UNDERSTANDING THE WTO, *supra* note 18, at 70-71.

²⁵⁶ *Id.*

²⁵⁷ *Id.*

²⁵⁸ VOGEL, *supra* note 9, at 112.

²⁵⁹ SANDS, *supra* note 17, at 956-57.

²⁶⁰ KNOX, *supra* note 19, at 2.

²⁶¹ *Id.*

²⁶² *Id.*

²⁶³ *Id.* at 3.

b. *Increasing Autonomy of Member Nations*

The next significant dispute arose from a challenge to U.S. regulations of gasoline under the Clean Air Act.²⁶⁴ The *Gasoline* decision represents a broader, more inclusive interpretation of the GATT Article XX exemptions. The regulations at issue established baseline "cleanliness" standards for both domestic and imported gasoline based on 1990 pollution levels.²⁶⁵ While the standards in this case applied to both domestic and imported gasoline, baseline levels were determined differently for domestic and foreign producers, to the detriment of foreign producers.²⁶⁶ The WTO panel found, first, that these standards violated the national treatment requirement of GATT Article III (4) by affording less favorable treatment to importers, and second, that the treatment was not justified under the Article XX exemptions.²⁶⁷ The United States appealed the panel ruling only as to the Article XX (g) exemption for conservation of an exhaustible natural resource.²⁶⁸ The Appellate Body held that the regulation *was* justified under Article XX (g), but that it failed to meet the requirements of the Article XX chapeau because there were alternative means available for the United States to achieve the same goals and because the United States had failed to explore ways to mitigate the asserted problems related to determination of baseline levels for importers.²⁶⁹ Significantly, the Appellate Body specifically stated that, based on the preamble to the WTO agreement, WTO members have a large measure of autonomy to determine their own policies on the environment.²⁷⁰

²⁶⁴ Panel Report, *United States - Standards for Reformulated and Conventional Gasoline*, WT/DS2/R (Jan. 29, 1996) [hereinafter *Gasoline Panel Decision*]; SANDS, *supra* note 17, at 961.

²⁶⁵ SANDS, *supra* note 17, at 961-62.

²⁶⁶ *Id.* at 962.

²⁶⁷ *Id.*

²⁶⁸ *Id.*

²⁶⁹ Appellate Body Report, *United States - Standards for Reformulated and Conventional Gasoline*, WT/DS2/AB/R, (Apr. 29, 1996), reprinted in 35 ILM 603 (1996); SANDS, *supra* note 17, at 963-64.

²⁷⁰ SANDS, *supra* note 17, at 965.

c. *Recognizing the Precautionary Principle*

Several years after the *Gasoline* decision, a dispute over beef hormones arose when Canada and the United States challenged a European Community (E.C.) prohibition on the import of products derived from cattle that had been given growth hormones.²⁷¹ The challenge was based on the WTO SPS Agreement, on the grounds that the European Community had not engaged in risk assessment prior to the ban.²⁷² The WTO panel found that the ban violated the SPS Agreement. The Appellate Body affirmed the panel's decision on appeal, holding that risk assessment is required before a member state may impose a sanitary measure that affects international trade.²⁷³ Despite its finding that the ban violated the SPS Agreement, the Appellate Body's decision recognized the precautionary principle as a valid approach to assessing risks relating to health and the environment. The decision noted that while regulations must be based on scientific evidence, they need not be based on a majority scientific view; rather, such regulations may be based on divergent minority scientific views.²⁷⁴ The scientific basis of the ban in this case, however, was too general.²⁷⁵ Further, the Appellate Body concluded that, while the precautionary principle does not override the specific requirements of the SPS Agreement, it is nonetheless reflected in, and constitutes a valid approach to risk assessment under, the agreement.²⁷⁶

²⁷¹ Panel Report, *EC – Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/R/USA (Aug. 18, 1997) (United States' complaint) [hereinafter *Beef Hormone Report*]; Panel Report, *EC – Measures Concerning Meat and Meat Products (Hormones)*, WT/DS48/R/CAN (Aug. 18, 1997) (Canada's complaint); SANDS, *supra* note 17, at 979.

²⁷² SANDS, *supra* note 17, at 980.

²⁷³ Appellate Body Report, *EC – Measures Concerning Meat and Meat Products (Hormones)*, WT/DS26/AB/R, WT/DS48/AB/R (Jan. 16, 1998); SANDS, *supra* note 17, at 980-81.

²⁷⁴ SANDS, *supra* note 17, at 980.

²⁷⁵ *Id.* Although the E.C. ban was not upheld, the Appellate Body did find that it was not a disguised trade restriction and was not motivated by protectionism. Christoforou, *supra* note 10, at 31.

²⁷⁶ SANDS, *supra* note 17, at 277.

d. *A Good Faith Effort May Make All the Difference*

The next significant WTO decision involved a challenge raised by several countries against a U.S. regulation that (1) prohibited the importation of shrimp harvested in a way that is harmful to sea turtles and (2) required importing countries to document a program of sea turtle protection in order to be certified as a shrimp harvester (the *Shrimp-Turtle* decision).²⁷⁷ The WTO panel found that the regulation violated GATT Article XI²⁷⁸ and was not justified under the Article XX chapeau.²⁷⁹ The United States appealed the panel ruling as to the Article XX ruling only.²⁸⁰ The Appellate Body followed a three-part analysis of the regulation under Article XX.²⁸¹ First, it found that the ban related to a listed exception, in this case, conservation.²⁸² Second, the ban fulfilled the conditions of the exception and was therefore justified under Article XX (g).²⁸³ Third, the Appellate Body considered the ban under the Article XX chapeau.²⁸⁴ The ban was found to be an arbitrary and unjustified discrimination and, therefore, failed to meet the requirements of the Article XX chapeau.²⁸⁵ The Appellate Body in this case invoked the chapeau in asserting a broad power to balance the rights of the disputing nations.²⁸⁶ The Appellate Body found that the effect of the regulation was to impose one nation's policy decisions on another, and noted that the United States had made no effort to try to

²⁷⁷ Panel Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/R (May 15, 1998); SANDS, *supra* note 17, at 966.

²⁷⁸ GATT Art. XI prohibits quantitative restrictions on imports. GATT art. XI .

²⁷⁹ SANDS, *supra* note 17, at 966.

²⁸⁰ *Id.* at 967.

²⁸¹ Appellate Body Report, *United States – Import Prohibition of Certain Shrimp and Shrimp Products*, WT/DS58/AB/R (Oct. 12, 1998); SANDS, *supra* note 17, at 967.

²⁸² Philippe Sands, *Environmental Protection in the Twenty-First Century: Sustainable Development and International Law*, in ENVIRONMENTAL LAW, THE ECONOMY AND SUSTAINABLE DEVELOPMENT: THE UNITED STATES, THE EUROPEAN UNION AND THE INTERNATIONAL COMMUNITY 369, 391-92 (Richard L. Revesz et al. eds., 2000).

²⁸³ *Id.*

²⁸⁴ SANDS, *supra* note 17, at 967.

²⁸⁵ *Id.*

²⁸⁶ Knox, *supra* note 19, at 37.

address the shrimp-turtle issue by means of a multilateral agreement with member nations.²⁸⁷ This decision marked a significant shift from the *Tuna-Dolphin* decision, in which a substantially similar regulation was held not to be aimed primarily at conservation and not “necessary.”²⁸⁸

This dispute continued after the United States amended the regulation, based on the Appellate Body’s recommendations, in order to bring the restriction into compliance with WTO agreements.²⁸⁹ Malaysia then asserted that the United States was still not in compliance with the Appellate Body’s ruling, because it continued to impose the restriction in the absence of an international agreement.²⁹⁰ The United States, Malaysia, and other countries engaged in negotiations, but they failed to reach a binding agreement.²⁹¹ In considering the validity of the amended regulations under GATT, the WTO panel and the Appellate Body both disagreed with Malaysia’s assertion.²⁹² Under these rulings the United States was obligated to make a serious, good faith effort to reach an agreement, but if the effort failed, it could then impose import restrictions.²⁹³ Therefore, the U.S. regulation did not, after a good faith effort to reach a multilateral agreement, constitute arbitrary or unjustified discrimination.²⁹⁴

e. Increasing Deference to National Interests

The trend of the WTO’s growing deference to health-and-environment national regulations continued with a Canadian challenge to a French law that banned the manufacture, sale, and use of asbestos and asbestos-containing products.²⁹⁵ The challenge was brought under the TBT Agreement and under GATT

²⁸⁷ *Id.*

²⁸⁸ *Id.* at 35.

²⁸⁹ *Id.* at 39.

²⁹⁰ *Id.*

²⁹¹ *Id.*

²⁹² *Id.*

²⁹³ *Id.*

²⁹⁴ *Id.* at 40.

²⁹⁵ Panel Report, *European Communities – Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R (Sept. 18, 2000); SANDS, *supra* note 17, at 974.

Article III (4).²⁹⁶ The panel, somewhat curiously, held that the ban was not a technical regulation and declined to analyze it under the TBT agreement.²⁹⁷ With respect to the Article III (4) claim, the panel found that the asbestos ban resulted in a violation of the national treatment provision because France was treating Canadian asbestos-containing products differently than the French substitute products that contained no asbestos.²⁹⁸ The panel reached its decision by reasoning that the two types of products were "like" for purposes of Article III.²⁹⁹ Although the panel found a violation of Article III (4), it held that the regulation was justified under the Article XX (b) exemption as necessary for the protection of human health.³⁰⁰

On appeal, the Appellate Body held that the ban was a technical regulation, but still did not proceed to analyze it as such under the TBT agreement.³⁰¹ The Appellate Body determined that asbestos-containing products were not "like" substitute products because "likeness" is a market-based criterion, and health considerations do affect a product's marketability.³⁰² The Appellate Body further held that the ban was justified under GATT Article XX (b), and specifically stated that member nations have an undisputed right to determine their own level of health protection.³⁰³ Finally, the Appellate Body reasserted that claims of necessity under Article XX (b) need not be based on majority scientific opinion, provided that they are based on a qualified and respected opinion.³⁰⁴

²⁹⁶ SANDS, *supra* note 17, at 974.

²⁹⁷ *Id.*

²⁹⁸ *Id.*

²⁹⁹ Robert Howse & Elisabeth Tuerk, *The WTO Impact on Internal Regulations: A Case Study of the Canada – EC Asbestos Dispute*, in *THE EU AND THE WTO: LEGAL AND CONSTITUTIONAL ISSUES* 283, 288 (Gráinne de Búrca & Joanne Scott eds., 2001).

³⁰⁰ SANDS, *supra* note 17, at 974.

³⁰¹ Appellate Body Report, *European Communities – Measures Affecting Asbestos and Asbestos – Containing Products*, WT/DS135/AB/R (Mar. 12, 2001); SANDS, *supra* note 17, at 974.

³⁰² Howse & Tuerk, *supra* note 299, at 288.

³⁰³ SANDS, *supra* note 17, at 976.

³⁰⁴ *Id.*

The Appellate Body review in this case demonstrated a deferential approach to domestic regulation that was aimed at vital health interests.³⁰⁵ Although the Appellate Body based its decision on GATT Article XX(b) and, therefore, did not find it necessary to conduct a full analysis of the regulation under the TBT Agreement, its reversal of the panel's finding that the TBT Agreement was inapplicable indicates that, in future cases, "the interpretation of the TBT Agreement will be critical to the balance the WTO strikes between domestic regulatory autonomy and trade liberalization."³⁰⁶

f. *A Pending Dispute*

In 2003, several countries, including the United States, challenged an E.U. policy regulating trade in foods containing genetically modified organisms (GMOs).³⁰⁷ The E.U. regulation can be seen as a manifestation of the precautionary principle, but it is similar to the REACH regulation in that it incorporates and specifically requires risk assessment for each product prior to approval for release into the market.³⁰⁸ The United States has challenged the regulation as a violation of the SPS and TBT Agreements and of GATT Article III.³⁰⁹ The WTO panel has decided to hold a scientific evidence hearing before making a ruling, a move celebrated by environmentalists as a small victory for the European Union.³¹⁰ Nonetheless, the panel found that the E.U. ban violated WTO agreements.³¹¹ Although the preliminary

³⁰⁵ Howse & Tuerk, *supra* note 299, at 289.

³⁰⁶ *Id.*

³⁰⁷ Request for the Establishment of a Panel by the United States, *European Communities - Measures Affecting the Approval and Marketing of Biotech Products*, WT/DS291/23 (Aug. 8, 2003); Bridgers, *supra* note 98, at 172.

³⁰⁸ Bridgers, *supra* note 98, at 179.

³⁰⁹ *Id.* at 182.

³¹⁰ Euractiv.com, *GMOs: Small Victory for EU in WTO Trade Dispute with US*, Aug. 27, 2004, <http://www.euractiv.com/Article?tcaturi=tcu:29-129771-16&type=news>; See also Richard Waddington, *WTO Ruling Delayed in Transatlantic Row over GMOs*, Aug. 26, 2004, <http://biotech.mir.dnsalias.net/biotech/servlet/OpenMir?do=getpdf&id=3333&forIE=.pdf>.

³¹¹ Euractiv.com, *Europe's Biotech Bans in WTO Firing Line*, <http://www.euractiv.com/Article?tcaturi=tcu:29-152393-16&type=news> (Feb. 9, 2006).

ruling was made public in February 2006, the final report including the exact basis for the decision has not yet been released.³¹² Following the institution of this complaint, the European Union modified its regulations on GMOs to allow for the approval of their use in certain cases.³¹³ Therefore, the E.U. will likely appeal after the issuance of the panel's final decision, based on its assertion that its new rules fully comply with the requirements of the WTO.³¹⁴

6. *Reconciling REACH with the WTO Agreements*

a. *Likely Challenges to REACH*

The REACH regulation will likely be challenged under the TBT Agreement and possibly under GATT Article III, the national treatment provision. In defense against these two potential challenges to the REACH regulation, the European Union would almost certainly assert that the regulation falls within the GATT Article XX exemption for the protection of human health.

i. *GATT Article III*

As discussed above, GATT Article III (4) provides that "products of the territory of any [member] shall be accorded treatment no less favorable than that accorded to like products of national origin in respect of all laws, regulations, and requirements affecting their internal sale."³¹⁵ The national treatment requirements of Article III have largely been incorporated into the TBT Agreement, and it appears that consideration of the requirement under the TBT Agreement may dispose of the need to analyze GATT Article III separately. The relationship between GATT Article III and the SPS Agreement was considered in the

³¹² World Trade Organization, *European Communities – Measures Affecting the Approval and Marketing of Biotech Products, Communication from the Chairman of the Panel*, 06-1473 (Mar. 30, 2006), available at http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds291_e.htm. See also Euractiv.com, *supra* note 311.

³¹³ Bloomberg, *Europe's Biotech-Seed Rules Ruled Illegal by WTO, U.S. Says*, <http://www.bloomberg.com/apps/news?pid=10000085&sid=aOhAZsCZvmNU&refer=Europe> (Feb. 8, 2006).

³¹⁴ See Euractiv.com, *supra* note 311.

³¹⁵ GATT art. III(4).

Beef Hormones case, in which it was stated that “since we have found that the . . . measures in dispute are inconsistent with the requirements of the SPS Agreement, we see no need to further examine whether the . . . measures in dispute are also inconsistent with Article I or III of GATT.”³¹⁶ As previously stated, the SPS and TBT Agreements are complementary and exclusive provisions aimed at different regulatory areas.³¹⁷

Therefore, analysis under the TBT Agreement should also dispose of the national treatment requirement of GATT Article III. The consideration of REACH under either GATT Article III or the TBT Agreement national treatment provision would, in any case, have the same result. The REACH regulation applies equally to all products, whether domestic or imported. The program will result in increased costs for the chemical industry worldwide, but there is no indication that E.U. countries will enjoy any advantage in this respect. Manufacturers from all countries must meet the same requirements and submit the same types of data for approval of their products. Therefore, the costs for all manufacturers worldwide will be similar.

The Appellate Body has previously indicated that regulations that result in burdens shared equally across national lines will not violate the national treatment requirement. In the *Gasoline* case, the import requirements were found to be discriminatory, but the Appellate Body noted that the discrimination could have been avoided by “imposing a uniform statutory baseline on refiners and importers alike.”³¹⁸ The REACH program should, therefore, not be found to conflict with the national treatment requirement under either the TBT Agreement or GATT Article III.

ii. The TBT Agreement

The TBT Agreement, in addition to the national treatment requirement, also requires that technical regulations not be adopted with the purpose of imposing unnecessary obstacles to

³¹⁶ Beef Hormone Report, *supra* note 271, ¶ 8.271; WTO ANALYTICAL INDEX, *supra* note 226, at 235.

³¹⁷ UNDERSTANDING THE WTO, *supra* note 18, at 30-31; WTO ANALYTICAL INDEX, *supra* note 226, at 532.

³¹⁸ Knox, *supra* note 19, at 35.

trade.³¹⁹ In addition, the regulations may "not be more trade-restrictive than necessary to fulfill a legitimate objective, taking account of the risks non-fulfillment would create."³²⁰ Legitimate objectives include protection of human health and safety,³²¹ which is the asserted objective in the case of REACH.

The European Union's desire to protect health by limiting market access to chemicals that are shown to be safe is a legitimate interest. In addition, risk assessment, which is required by the TBT Agreement, is an inherent part of the program. REACH does not effect a total ban on its target products, as was the case in the asbestos dispute. Rather, the regulation is a means of ensuring that risk assessment is employed for all chemicals used in the European Union. The requirement that each manufacturer submit quantitative data about its product's risks guarantees that products will not arbitrarily be banned.

Under the TBT agreement, the party asserting that a regulation is more trade-restrictive than necessary has the burden of proving that less-restrictive means would be as effective in meeting the stated goal.³²² One asserted objection under the TBT agreement is that REACH could result in the banning of products with no proof of any hazard.³²³ This clearly is not the purpose of the regulation, nor could it operate in this way. The incorporation of risk assessment eliminates the possibility of arbitrary bans. The requirement of quantitative data ensures that no decision on the use of a particular product can be made without scientific data. If the data do not show proof of hazard related to a products use, the conclusion must be that the product is presumed safe. Even if some hazards are shown, the use of a product will not be precluded if the benefits of use outweigh the risks. Therefore, this objection would fail.

The least-restrictive-means requirement of the TBT Agreement is likely the point on which the REACH regulation is most vulnerable to a WTO challenge. It remains to be seen whether

³¹⁹ TBT art. 2.2.

³²⁰ *Id.*

³²¹ *Id.*

³²² Knox, *supra* note 19, at 44-45.

³²³ Eileen Ciesla, *Red Tape, Regulations and Very Real Risks; A European Union Chemicals Policy Threatens to Unfairly Hinder U.S. Industry*, ORLANDO SENTINEL TRIB., June 9, 2002, at G1.

challengers of REACH can show an alternative scheme that would be effective in reaching the European Union's stated goals. However, the WTO's increasing deference to each member nation's chosen level of protection suggests that the WTO would also defer to its members' choice of the means to achieve this level of protection. This deference, considered in light of the WTO's willingness to find regulations "necessary" as the only reasonable alternative to achieve a member nation's stated goals, as discussed below, indicates that REACH would likely survive a least-restrictive-means challenge.

The TBT Agreement also requires that, if international standards exist, they should be used except in cases in which they would not be effective to fulfill the objective pursued.³²⁴ There are several international programs regulating chemicals in some way, including some that are in development stages.³²⁵ These include the United Nations Environment Program and agreements arising from the Rotterdam Convention and the Stockholm Convention.³²⁶ None of these, however, is a comprehensive program of the type sufficient to fulfill the European Union's goal of increased knowledge of the risks related to all chemicals being used within the Union. Also, inherent in the international schemes are the aforementioned limitations of the framework approach to addressing environmental issues. These agreements, therefore, may not be effective in reaching the European Union's goals.

It is notable that the European Union has already made many changes to the regulation following the comment period. While not precisely analogous to this case, the Appellate Body found in the second Shrimp-Turtle challenge that the United States's good faith effort to reach a multilateral agreement mitigated the possible finding that the United States was engaging in arbitrary or unjustified discrimination.³²⁷ The European Union's willingness to make concessions based on feedback would likely be a positive factor in deciding a WTO challenge to REACH.

³²⁴ TBT art. 2.4.

³²⁵ EC News Release, *supra* note 4.

³²⁶ *Id.*

³²⁷ Knox, *supra* note 19, at 40 (quoting Appellate Body Report, *United States - Import Prohibition of Certain Shrimp and Shrimp Products - Recourse to Article 21.5 of the DSU by Malaysia*, WT/DS58/AB/RW (Oct. 22, 2001)).

Finally, the TBT Agreement requires that member nations proposing a regulation that will have significant effect on other members must publish notice of the requirement at an early stage, allow comments, and take these comments into account before finalizing and implementing the proposed regulation.³²⁸ As noted above, the European Union has received many comments from interested parties and has implemented several significant changes to the program as a direct result.³²⁹ Changes include the exemption of polymers from registration and evaluation, increased confidentiality, and fewer registration requirements for low-volume substances.³³⁰

It seems likely that REACH would be upheld under the requirements of the TBT Agreement and the national treatment provision of GATT Article III. However, if it were determined that the REACH was not the least-restrictive means of determining the risks associated with chemicals used in the European Union, then the regulation may be found to conflict with the TBT Agreement. Nonetheless, the program should be upheld under the GATT Article XX exception for regulations aimed at protecting human health.

iii. GATT Article XX

The DSB has used a three-part analysis under Article XX.³³¹ First, the goal of the policy must fall within one of the recognized legitimate objectives.³³² The REACH regulation falls under the recognized exception of GATT Article XX (b) for protection of health, thereby satisfying part one.³³³

Part two requires that the measure be "necessary" to fulfill the stated objective.³³⁴ To be "necessary" under Article XX (b), there must be no reasonably available alternative that would

³²⁸ TBT Agreement, *supra* note 177, § 2.9.

³²⁹ EC News Release, *supra* note 4.

³³⁰ *Id.*

³³¹ WTO ANALYTICAL INDEX, *supra* note 226, at 351.

³³² *Id.*

³³³ *Id.*

³³⁴ *Id.*

achieve the desired goals.³³⁵ The WTO Appellate Body has continued to move toward a more deferential assessment of national regulations aimed at protection of health. For instance, in the asbestos case the Appellate Body made it clear that WTO member nations may choose their desired level of health protection, noting in the asbestos case that France's broad objective of "a complete halt of asbestos-related health risks"³³⁶ was legitimate.³³⁷ Because even controlled use of asbestos would prevent France from achieving its goal, a total ban was not found to be more trade-restrictive than necessary under Article XX.³³⁸

In the case of REACH, the purpose of the regulation is to protect health by ending exposure to chemicals that pose potential risks, and in order to realize this goal it is essential that the European Union is provided with data with which it can assess the risks associated with chemical use.³³⁹ It is unlikely that REACH would be found to have a discriminatory purpose, especially considering the European Union's oft-stated goal of effecting a high level of environmental protection. The REACH regulation is a natural manifestation of the goal. Thus, the WTO would likely consider REACH "necessary" if the European Union is able to show that the regulation is the only practical means of achieving the stated goals relating to the protection of health.

The third requirement under Article XX (b) is that the measures may not violate requirements the chapeau of Article XX. The chapeau prohibits the application of any measure that would constitute either arbitrary or unjustifiable discrimination or a disguised restriction on international trade.³⁴⁰ The REACH requirements apply equally to all manufacturers and importers and are

³³⁵ Knox, *supra* note 19, at 31.

³³⁶ *Id.*

³³⁷ *Id.*

³³⁸ *Id.* at 31-32.

³³⁹ European Comm'n, Community Policy for Chemical Products 2 (June 26, 1999), <http://europa.eu.int/comm/enterprise/reach/docs/whitepaper/council-11265-99.pdf>.

³⁴⁰ WTO ANALYTICAL INDEX, *supra* note 226, at 348.

designed to put E.U. and non-E.U. manufacturers on equal footing.³⁴¹ The chapeau provides a means for balancing environmental and trade interests.³⁴² The Appellate Body has found that market access can be conditioned on the level of effectiveness of another member country's regulatory program, but not on adoption of essentially the same program.³⁴³ In the case of REACH, the European Union will recognize testing done in other countries that is comparable to E.U. testing.³⁴⁴ Based on the uniform application of REACH, and on the equal treatment of E.U. and non-E.U. manufacturers, the program will be upheld under the Article XX chapeau.

In addition to the specific agreements of the WTO and the GATT, the WTO Dispute Settlement Body is guided by international customary law in settling disputes.³⁴⁵ The WTO panel and the Appellate Body were faced with the consideration of the precautionary principle as possible customary international law in the Beef Hormones case.³⁴⁶ The Appellate Body concluded that the issue is the subject of debate and that, while the principle might be one of customary international environmental law, it was not sure that it had been widely accepted as customary international law generally.³⁴⁷ The Appellate Body did not indicate what effect, if any, the distinction would have on WTO disputes,³⁴⁸ although it is inevitable that the issue will be raised again, most immediately in the pending Genetically Modified Foods dispute.³⁴⁹

Considering the controversy surrounding the precautionary principle, it seems unlikely that the WTO would embrace it wholeheartedly as one of its own guiding principles. It has, however, already acknowledged that the precautionary principle does

³⁴¹ EC News Release, *supra* note 4.

³⁴² Knox, *supra* note 19, at 37.

³⁴³ *Id.* at 41.

³⁴⁴ EC News Release, *supra* note 4.

³⁴⁵ PALMETER & MAVROIDIS, *supra* note 216, at 65.

³⁴⁶ *Id.*

³⁴⁷ *Id.*

³⁴⁸ *Id.*

³⁴⁹ See generally Bridgers, *supra* note 98.

have a place in WTO agreements, and is reflected in the preamble to the SPS Agreement.³⁵⁰ The WTO has also stated a general recognition of “some appropriate role for precautionary measures.”³⁵¹ Based on the growing recognition of the precautionary principle and acknowledgement of the autonomy of each member in deciding its own desired level of environmental and health protection, it seems unlikely that the DSB or the Appellate Body would prohibit any member from relying on the precautionary principle, especially when its invocation specifically incorporates risk assessment. It is probable that the dispute resolution system of the WTO will continue to consider each member nation’s objectives in applying precautionary measures and balance these interests with trade considerations on a case by case basis, regardless of whether it determines the precautionary principle to be a statement of customary international law.

In sum, REACH should be upheld. The program complies with GATT Article III based on its equal treatment of domestic and imported products. The program should also survive a challenge under the TBT Agreement because it is based on the legitimate objective of protection of human health and safety. It is less clear that REACH meets the TBT Agreement requirement that a member nation use the least restrictive means in meeting this legitimate objective. However, the WTO is increasingly deferential to each member nation’s chosen level of protection, and would likely defer to the European Union. In any case, the program would nonetheless be upheld under the GATT Article XX (b) exception as necessary for protection of health. The REACH program does not favor the European Union to the detriment of other nations. The program invokes the spirit of the precautionary principle, but it specifically incorporates risk assessment. The increasing recognition of each member nation’s right to choose its level of protection, along with the growing acceptance of the precautionary principle internationally will support a WTO decision upholding the REACH regulation.

³⁵⁰ SANDS, *supra* note 17, at 277.

³⁵¹ *Id.* at 8.

VI. THE ROLE OF THE WTO APPELLATE BODY AND THE EVOLUTION OF WTO DECISIONS

The asbestos decision illustrated the willingness under the WTO dispute resolution system, as opposed to the GATT system, to "give greater weight to the environmental and health concerns reflected in the Article XX (b) and (g) exceptions."³⁵² It also highlighted the principle that analysis under these provisions, and under the Article XX chapeau, should be aimed at preventing the invocation of the exemptions for protectionist purposes, *not* at limiting the use of measures that are truly intended to achieve environmental objectives.³⁵³ The evolution of WTO adjudications also indicates growing recognition of a role for precautionary measures.³⁵⁴

The outcry from environmentalists after the *Tuna-Dolphin* decision arose in large part from fear that environmental laws would continue to be held inconsistent with international trade agreements.³⁵⁵ The Appellate Body, however, has mitigated these fears by reaching a comprehensive resolution of conflicts between trade and environment, and has subsequently incorporated many of the reforms proposed by those critical of the outcome in the *Tuna-Dolphin* case.³⁵⁶ The Appellate Body has succeeded in achieving a "greener" approach to trade by not only overturning most of the least environmentally friendly aspects of the *Tuna-Dolphin* decision interpretation of the GATT, but also by avoiding the construction of other trade agreements in ways that would conflict with environmental laws, and by welcoming input from environmental experts.³⁵⁷

In particular, the TBT and SPS Agreements have been interpreted as providing WTO members both the power to adopt regulatory standards that provide a higher level of protection than an international standard, and the power to place the burden of proof on the party challenging the measure.³⁵⁸ In analyzing

³⁵² *Id.* at 976.

³⁵³ *Id.*

³⁵⁴ *E.g., id.* at 8.

³⁵⁵ Knox, *supra* note 19, at 2.

³⁵⁶ *Id.* at 3.

³⁵⁷ *Id.*

³⁵⁸ *Id.* at 29.

GATT Article XX, the Appellate Body recognized in the asbestos dispute that member nations may choose their desired level of health protection, and that this is the level of protection to consider when determining whether a measure is “necessary.”³⁵⁹ Also, the Appellate Body decisions in the reformulated gasoline and the shrimp-turtle cases increased the likelihood that domestic and international environmental measures will meet the national treatment requirement.³⁶⁰ Further, in the shrimp-turtle case, the Appellate Body held that the WTO is premised on maintaining, rather than undermining, the multilateral trading system, but rejected the panel’s finding that, “since trade restrictions conditioning market access on compliance with a policy unilaterally imposed by the importing country would undermine the multilateral trading system, they could not be justified by the chapeau.”³⁶¹ Therefore, the maintenance of the multilateral trading system is not a right or an obligation that may be asserted when challenging member nation regulations, nor is it an interpretive rule for the analysis of regulatory measures under Article XX.³⁶²

The fundamental purpose of the WTO is protection of free trade, but this purpose cannot be excised from the specific requirement that it “protect and preserve the environment.”³⁶³ The relationship between the WTO and its members is synergistic. As the Appellate Body decisions have evolved, they have influenced an evolution in environmental regulations. The WTO dispute resolution system not only acts in response to the changing attitudes of the member nations, but creates decisions that function as guideposts for nations whose aim is to fashion regulations that will comply with the WTO agreements. Further, when the proper resolution of a dispute is not readily apparent based on the plain meaning of the WTO agreements, the Appellate Body in particular has looked beyond the text of the agreements to

³⁵⁹ *Id.* at 31-32.

³⁶⁰ *Id.* at 33-34.

³⁶¹ *Id.* at 51-52.

³⁶² *Id.* at 52 (quoting Appellate Body Report, United States - Import Prohibition of Certain Shrimp and Shrimp Products, ¶ 121, WT/DS58/AB/R (Oct. 12, 1998)).

³⁶³ WTO ANALYTICAL INDEX, *supra* note 211, at 34.

"substantive principles on which there is agreement among WTO members."³⁶⁴

The Appellate Body has been effective in reconciling trade and environmental issues on an international level, and in doing so has accomplished what many of the recent treaty-based schemes have failed to do. The Appellate Body has been able to reconcile these considerations by relying on the plain meaning of the agreements when possible, and by searching for political agreement to fill any gaps.³⁶⁵ The decisions of the WTO dispute resolution system have become increasingly accepted by member nations, even as they have become more responsive to environmental concerns.³⁶⁶ The WTO is, after all, based on agreements negotiated by all member nations for the purpose of maintaining open markets of trade, while at the same time allowing members to maintain a certain level of autonomy.³⁶⁷ The WTO should, therefore, respond to the shifting political concerns of the member nations.³⁶⁸ The WTO seems to be the most effective forum for reaching real solutions to these issues. Resolution of a challenge to the REACH program will give the WTO the opportunity to further assert its effectiveness in crafting resolutions that enjoy broad political support and are deferential to the environmental concerns of member nations. It will also influence future environmental regulations, and will be important as a precedent in determining the outcome of subsequent disputes.

CONCLUSION

The REACH agreement is an example of the evolving, interdependent relationship between the WTO and its member nations. The regulation was crafted to comply with WTO requirements as they have evolved. REACH applies equally to all products, imposing no greater burden on imported products than those imposed on domestic products. The incorporation of risk assessment measures prevents any regulatory bans in the absence of a proven risk. While the program will affect other WTO

³⁶⁴ Knox, *supra* note 19, at 61.

³⁶⁵ *Id.* at 48.

³⁶⁶ *Id.* at 70.

³⁶⁷ *E.g., id.* at 47.

³⁶⁸ *Id.* at 47-48.

member nations importing chemicals into the European Union, the primary goal is protection of health and the environment based on the European Union's chosen level of protection. This is a legitimate goal under WTO agreements.

REACH is based on a moderate application of the precautionary approach that specifically incorporates risk assessment. While the precautionary principle is controversial, it has received much support in international environmental treaties. However, the difficulties inherent in implementing these treaties prevent their measures from having the intended effect. The responsive nature of the WTO dispute resolution system, particularly of the Appellate Body, allows it to recognize the international support for more precautionary measures. The WTO dispute resolution system is the most effective, and possibly the only, forum able to craft a resolution that is deferential to environmental concerns, and politically acceptable to its member nations. Because REACH is a moderate and balanced invocation of the precautionary principle, it should be upheld.