

Climate Change Disputes at the World Trade Organization: National Energy Policies and International Trade Liability

NILMINI SILVA-SEND*

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* Dr. Silva-Send is the Senior Policy Analyst at the Energy Policy Initiatives Center, University of San Diego, and Adjunct Professor at USD's School of Law. She has a B.S. in Chemistry, an LLB from the University of London and a PhD in International Law, with an emphasis in International Environmental Law. Dr. Silva-Send's policy research involves analysis of state, regional and local energy and climate change policies and regulatory research. As an Adjunct Professor, she has developed and teaches a highly contemporary class in international law and energy covering international energy investment, WTO law related to energy, and linkages of both to international climate change law. In the past, Dr. Silva-Send has been an environmental consultant in California and Europe. She has also lived and worked for many years of her life in Europe, in particular in Germany.

I. INTRODUCTION

The need to balance developmental and environmental issues globally has become acute due to the issue of climate change. As negotiations on the future of the international climate regime languish and countries have difficulties agreeing on a balance, international law, and specifically international dispute resolution, may be able to provide some guidance. According to international environmental law, states have a responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other states, or to areas beyond the limits of their national jurisdiction.¹ This principle was applied in a 1935 arbitration² to find a balance between cross border pollution damage in one country and industrial development rights in another. More recently in 1997, in the Gabcikovo-Nagymaros case,³ though obiter dicta, the International Court of Justice (ICJ) confirmed the principle but found that the environmental damage claimed by Hungary did not rise to the level of a peremptory norm to act as a defense to terminate the contractual agreements to build a hydroelectric power system under the treaty between Hungary and Slovakia.⁴

The diffuse nature of climate change sources and damage, difficulties in establishing cause and effect, and procedural barriers to international jurisdiction⁵ make it unlikely that traditional international law courts,

1. See United Nations Conference on the Human Environment, Stockholm, Swed., June 5–16, 1972, princ. 21, *Declaration of the United Nations on the Human Environment*, U.N. Doc. A/CONF.48/14/Rev.1 (1973) [hereinafter *Stockholm Declaration*]. This principle of Roman law, also known as the no-harm rule, is incorporated into Principle 21 of the Stockholm Declaration as:

States have, in accordance with the Charter of the United Nations and the principles of international law, the sovereign right to exploit their own resources pursuant to their environmental policies, and the responsibility to ensure that activities within their jurisdiction or control do not cause damage to the environment of other States or of areas beyond the limits of national jurisdiction.

Id.

2. See *Trail Smelter Case (U.S. v. Can.)*, 3 R.I.A.A. 1905, 1963, 1965 (1935) (Int'l Joint Comm'n 1941). The International Joint Commission, after finding Canada liable, initially found \$350,000 in damages, *id.* at 1918, then found an additional \$78,000 in damages, *id.* at 1933, and imposed a management and regulatory scheme to monitor and enforce compliance, *id.* at 1966.

3. See *Gabcikovo-Nagymaros Project (Hung./Slovk.)*, Judgment, 1997 I.C.J. 7, 41–42 (Sept. 25) (citing *Legality of Threat or Use of Nuclear Weapons*, Advisory Opinion, 1996 I.C.J. 226, 241–42 (July 8)).

4. The Court considered that “such ground for precluding wrongfulness can only be accepted on an exceptional basis” and that “the state of necessity can only be invoked under certain strictly defined conditions which must be cumulatively satisfied.” *Id.* at 40.

5. One of the greatest barriers to use of the International Court of Justice is non-submission to its jurisdiction by the US and China, the largest energy users and GHG emitters and potentially the most vulnerable defendants. A list of the countries that have

such as the ICJ, will be providing such balancing for climate change issues in the near future. However, the obligations that most countries have taken on in the climate change regime require adoption of national energy policies that have significant impacts on international trade. Because of this, climate change disputes are arising at the World Trade Organization (WTO). Historically, the WTO dispute resolution system provided a system for balancing contractual rights and obligations in international trade.⁶ However, through the evolution of its purpose⁷ and decisions on the compatibility of national environmental measures and international trade law, it appears that the WTO dispute settlement body has attempted to find ways to balance trade and environmental rights and obligations affecting its members⁸ While this may lead us to assume that decisions of WTO environmental jurisprudence are consistent in cases with similar facts, the principles of *stare decisis* and precedent are not principles of international law⁹ and as a result, there is still room for inconsistent decisions at the WTO which may have effects on states' policies, obligations and rights.

This article, therefore, draws attention to the different outcomes that may result when WTO law is applied to resolve climate related national energy policy disputes, signals this might send for national energy policies,

submitted the compulsory commission of the ICJ can be found on its website. Int'l Court of Justice, *Declarations Recognizing the Jurisdiction of the Court as Compulsory*, <http://www.icj-cij.org/jurisdiction/index.php?p1=5&p2=1&p3=3> (last visited Oct. 18, 2012).

6. According to its preamble, the purpose of the GATT 1947, the precursor of the WTO 1994, was the "substantial reduction of tariffs and other barriers to trade and to the elimination of discriminatory treatment in international commerce." General Agreement on Tariffs and Trade pmbl., Oct. 30, 1947, 61 Stat. A-11, 55 U.N.T.S. 194 [hereinafter GATT].

7. The purpose is reflected in the context of the preambles of GATT 1947 as, "[R]elations in the field of trade and economic endeavor should be conducted with a view to raising standards of living . . . developing the full use of the resources of the world and expanding the production and exchange of goods." GATT, *supra* note 6, pmbl. In contrast, the preambular context of the Marrakesh Agreement states the purpose as:

[R]elations in the field of trade and economic endeavor should be conducted with a view to raising standards of living . . . expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment . . .

Marrakesh Agreement Establishing the World Trade Organization pmbl., Apr. 15, 1994, 1867 U.N.T.S. 154 [hereinafter Marrakesh Agreement].

8. Marrakesh Agreement, *supra* note 7, pmbl.

9. Gilbert Guillaume, *The Use of Precedent by International Judges and Arbitrators*, 2 J. INT'L DISPUTE SETTLEMENT No. 1, at 5, 14 (2011).

and how a subtle effect of indirect state liability may arise. Several pending or unresolved complaints currently at the WTO are used to demonstrate these effects. The complaints include the greenhouse gas controversy,¹⁰ the wind energy subsidies complaint,¹¹ and the feed-in tariffs complaint.¹² The next section, Section II, presents the basic WTO obligations of the four countries involved in these complaints (Japan, Canada, USA, China), and ways that state liability can theoretically arise. Section III explains, with some example cases, how the consistency of national environmental policies with WTO laws has previously been decided. Section IV explains the main energy-related obligations of the countries under the international climate change regime. Section V discusses those unresolved complaints in light of the countries' WTO and climate regime obligations. Finally, the article concludes by demonstrating that the WTO not only has the power to change the direction of countries' energy policies, but its decisions may also lead to indirect state liability.

It should be noted that this paper is not about the compatibility of national energy policies with WTO law per se. Therefore there is no exhaustive discussion of all analogous environmental compatibility cases. Select cases are discussed only as indicators of WTO's potential to change national (energy) policies as well as to lead to a subtle and indirect effect on state liability.

II. TRADE, ENERGY AND THE WTO

Global GDP growth is closely related to growth in energy (mainly oil) production (Figure 1a).¹³ The percentage of global GDP associated with global trade, including both imports and exports, has risen from less than 20% in the 1960s to more than 40% after 2000 (Figure 1b).¹⁴

10. See *infra* p. 216.

11. See Request for Consultations by the United States, *China—Measures Concerning Wind Power Equipment*, WT/DS419/1 (Jan. 6, 2011), available at [http://www.worldtradelaw.net/cr/ds419-1\(cr\).pdf](http://www.worldtradelaw.net/cr/ds419-1(cr).pdf).

12. See Request for Consultations by Japan, *Canada—Certain Measures Affecting the Renewable Energy Sector*, WT/DS412/1 (Sept. 16, 2010), available at [http://www.worldtradelaw.net/cr/ds412-1\(cr\).pdf](http://www.worldtradelaw.net/cr/ds412-1(cr).pdf) [hereinafter Feed-in Tariffs Request for Consultations].

13. See Gail Tverberg, *Oil and the Economy: Why it is Important to Figure Out Approximately Where We Are Headed*, ENERGY BULLETIN, fig.4 (Dec. 2, 2010), <http://www.energybulletin.net/stories/2010-12-02/oil-and-economy-why-it-important-figure-out-approximately-where-we-are-headed>.

14. See *Merchandise Trade (% of GDP)*, THE WORLD BANK, available at <http://data.worldbank.org/indicator/TG.VAL.TOTL.GD.ZS/countries?display=graph> (last visited Sept. 28, 2011).

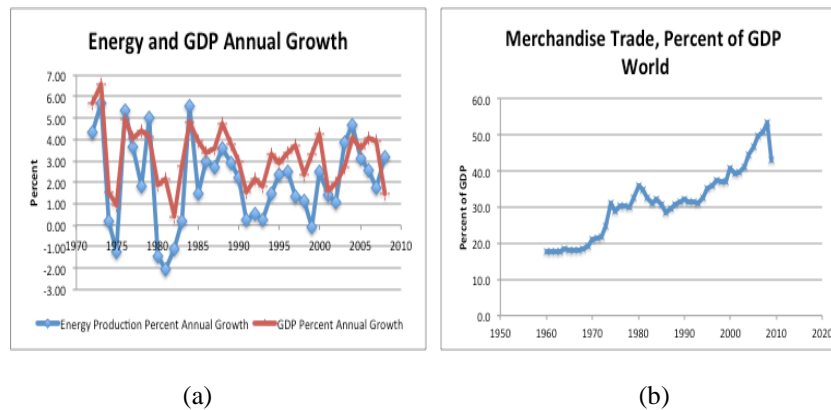


Figure 1: (a) Relationship between world GDP growth and growth in energy production; (b) Global merchandise trade (imports and exports) as percentage of global GDP.

After a dip during the recession years of 2008-2009, a continued increase in this trade relationship may be expected.¹⁵ This expansion in global trade itself raises many energy and climate related questions not discussed here. One such question is how trade in environmental goods should be liberalized,¹⁶ an issue that fits into the original framework of the pre-WTO General Agreement on Tariffs and Trade (GATT), which was aimed towards the liberalization of global trade according to mutually agreed contractual rules.¹⁷ This was to be accomplished by “. . . developing the full use of the resources of the world and expanding the production and exchange of goods . . .”¹⁸ The later development of GATT under the Agreement Establishing the WTO in 1994, states that standards of living

15. This assumption is based on historical rates of GDP growth shown in Figure 1(b), as well as future expected growth in advanced economies, such as China. See *World Econ. Outlook: Growth Resuming, Dangers Remain*, INTERNATIONAL MONETARY FUND, 1, 2 tbl.1.1, 10 (April 2012), available at <http://www.imf.org/external/pubs/ft/weo/2012/01/index.htm>.

16. Discussions are on-going on the liberalization of trade in environmental goods and services within the Doha Round. See World Trade Organization, Ministerial Declaration of 14 November 2001, ¶ 31(iii), WT/MIN(01)/DEC/1, 41 I.L.M 746 (2002) [hereinafter Doha Declaration], available at http://www.wto.org/english/thewto_e/minist_e/min01_e/mindecl_e.pdf.

17. See GATT, *supra* note 6, pmbl.

18. *Id.*

should be raised through the production of, and trade in, goods and services “ . . . while allowing for the optimal use of the world’s resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment . . . ”¹⁹ With this change toward recognition of the importance of the environment, the WTO has become more than a venue for mere trade liberalization. The WTO’s rules now deeply affect any member state regulatory structure as to the trade of goods, financial services, subsidies, and agriculture.²⁰ There may also be effects on domestic public health standards, conservation, the environment and national development agendas.²¹ As national energy policies can permit, restrict or enhance various types of carbon intense goods, as well as the trade of those goods,²² world trade can thus have a large impact on national energy and climate policies as well as greenhouse gas (GHG) emissions.

A. *WTO Provisions Relevant to the Environment and by
Extension to Climate Change*

Relevant to this article, the most important multilateral trade agreements under the Agreement Establishing the WTO are the GATT, the Agreement on Technical Barriers to Trade (TBT),²³ and the Subsidies and Countervailing Measures Agreement (SCM).²⁴ The members of the WTO have agreed to the basic obligation of non-discrimination among equal partners, expressed either as the most-favored-nation principle (MFN),²⁵ or as the national treatment principle.²⁶ The non-discrimination principles are expressed differently in each agreement, but the MFN principle basically

19. See Marrakesh Agreement, *supra* note 7, pmbl.

20. A study on the effects of WTO accession on policies and reforms in transition countries that have recently joined the WTO illustrates the issues. See Marc Bacchetta & Zdenek Drabek, *Effects of WTO Accession on Policy-making in Sovereign States: Preliminary Lessons from the Recent Experience of Transition Countries* 12 (WTO, Org. Dev. and Econ. Research Div., Staff Working Paper No. DERD-2002-02, Apr. 2002), available at http://www.wto.org/english/res_e/reser_e/derd200202_e.htm.

21. See *infra* pp. 207–09 (exemplifying how countries may have to defend their environmental policies).

22. For example, Japan’s national energy policy, which requires the most energy efficient standards for goods in a class of goods, can act to restrict the import of the same type of goods that are less energy efficient. See *infra* pp. 217–19.

23. Agreement on Technical Barriers to Trade, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1868 U.N.T.S. 120 [hereinafter TBT].

24. Agreement on Subsidies and Countervailing Measures, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1869 U.N.T.S. 14 [hereinafter SCM].

25. GATT, *supra* note 6, art. I

26. *Id.* art. III.

requires all trade concessions for a good given by state A, to an equivalent good from state B, to be given immediately and unconditionally to all WTO member states.²⁷

National treatment means equal treatment between domestic and imported like products with respect to taxes, charges, laws, regulations, and requirements.²⁸ There is a positive requirement to “accord treatment no less than that accorded like products of national origin,”²⁹ and a negative requirement to not afford “protection to domestic production.”³⁰ There is also a requirement to provide equality of competitive conditions for imported products in relation to domestic products.³¹

The TBT further defines GATT Article III, subdivision (4), on the “laws, regulations and requirements affecting [the] internal sale, offering for sale, purchase, transportation, distribution or use [of products].”³² An example of a regulation that may act as a barrier to trade is a technical standards barrier.³³ Harmonizing this principle into international technical standards is encouraged, and would be important to improve the efficiency of production and facilitate international trade.³⁴ Where international standards exist, and few do,³⁵ members must use them.³⁶ National technical regulations that meet certain conditions will be rebuttably presumed consistent with this obligation.³⁷ A national regulation with a significant effect on international trade must be notified and published.³⁸

27. *Id.* art. I, ¶ 1.

28. See Appellate Body Report, *European Communities—Measures Affecting Asbestos and Asbestos-Containing Products*, ¶ 97, WT/DS135/AB/R (Mar. 12, 2001) [hereinafter Appellate Body Report, *Asbestos Measures*].

29. GATT, *supra* note 6, art. III, ¶ 2.

30. *Id.* art. III, ¶ 3(b).

31. Appellate Body Report, *Asbestos Measures*, *supra* note 28, ¶ 97.

32. GATT, *supra* note 6, art. III, ¶ 2.

33. Japan’s Top Runner Program, adopted under its 1979 Law for Rational Use of Energy, is a good example of a technical barrier to trade. See *infra* pp. 217–19.

34. See TBT, *supra* note 23, pmb1.

35. See, e.g., Codex Alimentarius Comm’n, *Codex Alimentarius* (2011), <http://www.codexalimentarius.org/standards/en/>. The Codex Alimentarius is one such codification for food safety standards that is recognized by the WTO as an international standard in the context of the Agreement on the Application of Sanitary and Phytosanitary Measures. See Agreement on the Application of Sanitary and Phytosanitary Measures Annex A, ¶ 3(a), Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 1A, 1867 U.N.T.S. 493 [hereinafter SPS].

36. See TBT, *supra* note 23, art. 2.4.

37. *Id.* art. 2.5.

38. *Id.* arts. 2.9.1–2.9.2.

Subsidies are a major policy instrument used by governments to promote clean energy development.³⁹ In the SCM a subsidy is defined as a contribution by a government or a public body that also provides a benefit and meets all the following criteria: (a) is direct, such as grants, loans, or equity infusion, or potentially direct, such as loan guarantees, or a liability such as a loan or guarantee;⁴⁰ (b) is revenue foregone for the government, for example, tax credits;⁴¹ (c) is a government provision or purchase of goods or services other than infrastructure; and (d) the benefit must be considered to be income or price support.⁴²

Under the SCM, a subsidy can be prohibited, actionable, or non-actionable, and prohibited subsidies and actionable subsidies must be shown to be specific to an enterprise or group of enterprises.⁴³ A prohibited subsidy is either contingent upon export performance or upon the use of domestic versus imported goods.⁴⁴ On the other hand, actionable subsidies are those that either cause adverse effects to the interests of other parties, or cause injury to the domestic industry, or nullify or impair benefits conferred by tariff concessions, or cause serious prejudice to party interests.⁴⁵ Serious prejudice includes such effects as increasing the world market share of the allegedly subsidized product as compared to the average share it had in the previous 3 years.⁴⁶

Whether national environmental regulations are allowed to stand under the WTO depends to a large extent on the interpretation of the exceptions permitted in each agreement. Thus GATT Article XX states that as long as national measures “. . . are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised reaction on international trade, nothing in this agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures . . . (b) necessary to protect human, animal or plant life or health, or . . . (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.”⁴⁷

39. See U.N. ENV'T. PROGRAMME, DIV. OF TECH., INDUS. AND ECON., REFORMING ENERGY SUBSIDIES: OPPORTUNITIES TO CONTRIBUTE TO THE CLIMATE CHANGE AGENDA, at 19, U.N. Sales No. 10.III.D.18 (2010).

40. See SCM, *supra* note 24, art. 1.1(a)(1)(i).

41. *Id.* art. 1.1(a)(1)(ii).

42. *Id.* art. 1.1(a)(1)(iii), (a)(2).

43. See SCM, *supra* note 24, arts. 2.1, 3–9.

44. *Id.* art. 3.1.

45. See *id.* art. 5.

46. *Id.* art. 6.3(d).

47. GATT, *supra* note 6, art. XX, ¶ I(b), (g).

The national treatment exception is expressed differently in the TBT, that technical regulations “. . . are not prepared, adopted or applied with a view to or with the effect of creating unnecessary obstacles to international trade” and “. . . shall not be more trade-restrictive than necessary to fulfil a legitimate objective . . . ”⁴⁸ Legitimate objectives include the protection of human health or safety, animal or plant life or health, or the environment.⁴⁹ In either agreement the underlying principle when permitting national environmental regulations is to not discriminate or create unnecessary obstacles to international trade.

There is no provision for environmental exceptions in the SCM.⁵⁰ Whether subsidies are allowed to stand that protect the environment or conserve resources when not more trade restrictive than necessary, is the subject only of academic discussion.⁵¹ One author has suggested that actionable subsidies can be subject to a GATT Article XX-type analysis.⁵² If so, provided the subsidy is related to environmental protection, is necessary to protect humans and the environment and is applied in a non-discriminatory manner, such actionable subsidies may be consistent with WTO law.

It is relevant to note that the primary objective of a dispute settlement ruling is to bring the inconsistent measure into conformance with the relevant agreement.⁵³ If this is impracticable, the temporary remedy of compensation can be given.⁵⁴ The WTO next provides for suspension of concessions, also known as countermeasures, proportional to the amount of impairment until nullification is removed, and subject to authorization by the Dispute Settlement Body (DSB), and then as a last step, provides for retaliation.⁵⁵ Countermeasures are generally authorized

48. TBT, *supra* note 23, art. 2.2.

49. *See id.*

50. *See generally* SCM, *supra* note 24.

51. *See* Alan O. Sykes, *The Economics of WTO Rules on Subsidies and Countervailing Measures* 22–23 (Univ. of Chi. Law Sch. Inst. for Law and Econ., Working Paper No. 186, 2003) available at <http://www.law.uchicago.edu/Publications/Working/index.html>.

52. *See* MARIE WILKE, INT’L CTR. FOR TRADE AND SUSTAINABLE DEV., FEED-IN TARIFFS FOR RENEWABLE ENERGY AND WTO SUBSIDY RULES: AN INITIAL LEGAL REVIEW 20 (2011) available at <http://ictsd.org/i/publications/112508/?view=document>.

53. Understanding on Rules and Procedures Governing the Settlement of Disputes, art. 19, ¶ 1, Apr. 15, 1994, Marrakesh Agreement Establishing the World Trade Organization, Annex 2, 1869 U.N.T.S. 401 [hereinafter DSU].

54. *See id.* art. 22, ¶ 2.

55. *See id.* arts. 3, ¶ 7, 22.

in the same sector as the violation but on occasion may be authorized in non-related sectors.⁵⁶ The WTO itself does not impose the countermeasures, but authorizes the plaintiff (trade-injured country) to impose these countermeasures themselves.⁵⁷ As remedies supported under WTO law to re-adjust the trade rights and obligations, these measures are not expected to affect state liability.

B. International State Liability

According to Charnovitz,⁵⁸ “it was once possible to characterize the GATT as a self contained contractual arrangement in which the rules of state responsibility” did not apply.⁵⁹ As Charnovitz further states, however, the Appellate Body, in the Reformulated Gasoline case, stated “the DSU reflects a measure of recognition that the General Agreement [on Tariffs and Trade] is not to be read in clinical isolation from public international law.”⁶⁰ This leads to the conclusion that whenever the remedies authorized could be considered “sanctions” the issue of responsibility or liability does arise.⁶¹ Especially if and when countermeasures, especially as cross-retaliation in sectors not associated with the violation, are authorized to compel a state to comply with a previous “rebalancing order” (either to remove the offending measure or be permitted to suspend concessions granted) the responsibility-inducing effect of the remedy becomes more clear.⁶² This paper suggests, however, an effect beyond the effect of induced responsibility that can occur post WTO authorized remedial measures, or even without WTO remedial measures at all, by showing that, in the particular case where climate related energy policies are at stake, a country can become liable through trade effects whether or not trade remedies are authorized. This is especially significant because, more than traditional national environmental regulations, energy policies are the basis of development in any country.⁶³ Thus, such trade effects

56. *See id.* art. 22, ¶ 3(a)-(b).

57. *See id.* art. 22, ¶ 3.

58. Steve Charnovitz, *Rethinking WTO Trade Sanctions*, 95 AM. J. INT’L L. 792 (2001).

59. *Id.* at 793.

60. *Id.* at 793–94.

61. *Id.* at 805.

62. By using “sanctions” to induce compliance with a breach of WTO rules, a WTO sanction can be considered a countermeasure that is taken to induce compliance with international obligations. *See* Rep. of the Int’l Law Comm’n, 53d Sess., Apr. 23–June 1, July 2–Aug. 10, 2001, art. 49, U.N. Doc. A/56/10; GAOR 56th Sess., Supp. No. 10 (2001), *reprinted in* [2001] 2 Y.B. Int’l L. Comm’n 26, U.N. Doc. A/CN.4/SER.A/2001/Add.1.

63. *See supra* Figure 1(a).

brought into global perspective as WTO disputes potentially have significant effects on national development as well as climate protection.

In this paper, state liability is defined as economic or financial liability arising from economic or financial damage caused *not* by intentional or non-intentional breach of international obligations or unlawful act, but as a result of implementation, in part, of international obligations undertaken by the majority of countries for a greater public good, specifically, the obligation to minimize damage to the climate necessarily through national energy policies.

III. PAST RULINGS ON THE CONSISTENCY OF NATIONAL ENVIRONMENTAL MEASURES WITH WTO LAW

The DSB's interpretation of what constitutes an environmental measure and its compatibility with WTO law has evolved through a series of environmental and natural resource cases described below.

Starting with the Herring-Salmon case in 1988,⁶⁴ the Panel held that a Canadian measure, adopted in part for conservation, prohibiting the export of salmon and herring, was inconsistent with GATT and could not be justified as an environmental measure because it was not *primarily* concerned with conservation or protection.⁶⁵ However, in the Shrimp-Turtle case (1998), the AB rephrased this primary concern requirement with a requirement that the measure need only relate to conservation.⁶⁶ Previously, in the Reformulated Gasoline case (1996), the AB had clarified that even if a measure “. . . falls within the terms of

64. Report of the Panel, *Canada—Measures Affecting Exports of Unprocessed Herring and Salmon*, L/6268-35S/98 (Nov. 20, 1987) [hereinafter Report of the Panel, Unprocessed Herring and Salmon].

65. *Id.* at ¶ 4.6 (emphasis added).

The Panel concluded for these reasons that, while a trade measure did not have to be necessary or essential to the conservation of an exhaustible natural resource, it had to be primarily aimed at the conservation of an exhaustible natural resource to be considered as ‘relating to’ conservation within the meaning of Article XX(g) . . . A trade measure could therefore in the view of the Panel only be considered to be made effective ‘in conjunction with’ production restrictions if it was primarily aimed at rendering effective these restrictions.

Id.

66. Appellate Body Report, *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 142, WT/DS58/AB/R (Oct. 12, 1998) [hereinafter Shrimp AB Report].

Article XX (g) . . . ”;⁶⁷ it must also be assessed for conformity with the conditions of the Chapeau.⁶⁸ For example, by not taking into account whether other countries’ resource conservation policies were as effective as US conservation policies, or by negotiating an international sea turtle protection convention with Caribbean states to the exclusion of other shrimp importing countries, the US had arbitrarily discriminated against other countries.⁶⁹

The Tuna-Dolphin cases (1991, 1994) clarified other requirements for national environmental exceptions.⁷⁰ In Tuna-Dolphin I, the US argued that the ban on the import of tuna caught by fleets that did not exclude dolphins under its Marine Mammal Protection Act (1972),⁷¹ could be justified by GATT Article XX (b) and (g), due to its environmental and

67. Appellate Body Report, *United States—Standards for Reformulated and Conventional Gasoline*, 22, WT/DS2/AB/R (April 29, 1996) [hereinafter *Reformulated Gasoline AB Report*].

68. *Id.* The AB then explained how the chapeau should be applied:

In order that the justifying protection of Article XX may be extended to it, the measure at issue must not only come under one or another of the particular exceptions—paragraphs (a) to (j)—listed under Article XX; it must also satisfy the requirements imposed by the opening clauses of Article XX. The *analysis is, in other words, two-tiered: first, provisional justification* by reason of characterization of the measure under XX(g); *second, further appraisal* of the same measure *under the introductory clauses* of Article XX.

The chapeau by its express terms addresses, not so much the questioned measure or its specific contents as such, but rather the *manner in which that measure is applied*. It is, accordingly, important to underscore that the purpose and object of the introductory clauses of Article XX is generally the prevention of “abuse of the exceptions of [what was later to become] Article [XX].” This insight drawn from the drafting history of Article XX is a valuable one. The chapeau is animated by the principle that while the exceptions of Article XX may be invoked as a matter of legal right, they should not be so applied as to frustrate or defeat the legal obligations of the holder of the right under the substantive rules of the *General Agreement*. If those exceptions are not to be abused or misused, in other words, the measures falling within the particular exceptions must be applied reasonably, with due regard both to the legal duties of the party claiming the exception and the legal rights of the other parties concerned.

Id. at 22 (emphasis added).

69. Shrimp AB Report, *supra* note 66, ¶¶ 163, 171.

70. For the U.S.-Mexico Panel Report of the dispute, *see* Panel Report, *United States—Restrictions on Imports of Tuna*, WT/DS21/R (Sept. 3, 1991) [hereinafter Tuna Dolphin Panel I Report]. For the U.S.-EEC Panel Report of the dispute, *see* Panel Report, *United States—Restrictions on Import of Tuna*, WT/DS29/R (June 16, 1994) [hereinafter Tuna Dolphin Panel II Report]. For a summary of the series of cases related to this issue, *see Mexico etc versus US: ‘tuna-dolphin’*, WORLD TRADE ORGANIZATION, http://www.wto.org/english/tratop_e/envir_e/edis04_e.htm (last visited October 1, 2012).

71. Marine Mammal Protection Act of 1972, 16 U.S.C. §§ 1361–1407 (2006). The U.S. Marine Mammal Protection Act was adopted on the basis of evidence that human activities were in part causing the depletion to below sustainable population levels of various marine mammals. *See id.* § 1361(1).

conservation objectives.⁷² However, the Panel stated that if the measure applied extra-territorially, and if each contracting party were to apply its own conservation policies outside its jurisdiction, then other states' trade rights would be affected.⁷³ Thus the Panel rejected the extra-territorial application of Article XX (b) and (g).⁷⁴

In Tuna-Dolphin II, a US measure banned the import of processed tuna from countries that did not ban the import of tuna caught by a method that did not exclude dolphins.⁷⁵ This secondary nation embargo was challenged by the EEC and the Netherlands.⁷⁶ Consistent with its previous Tuna-Dolphin decision, the Panel found that a measure could not be distinguished on the basis of its method of production, and that a state had extra-territorial jurisdiction, at most, only upon its own nationals.⁷⁷ A conservation measure applied extra-territorially would only work by forcing the other countries to change their policies, a violation of the sovereignty of states, and trade measures could not be used to protect domestic producers required to achieve higher environmental standards (and therefore only able to sell at higher prices).⁷⁸ Further, the secondary trade embargo was considered not necessary to protect dolphins, as there were reasonable alternatives.⁷⁹

Though not adopted, the Tuna-Dolphin rulings' non-distinction of a product on the basis of its production method can have repercussions for

72. See Tuna Dolphin Panel I Report, *supra* note 70, ¶¶ 5.24, 5.30.

73. *Id.* ¶ 5.32.

74. *Id.* ¶ 5.32.

75. See Tuna Dolphin Panel II Report, *supra* note 70, ¶ 2.12 (“[A]ny nation (“intermediary nation”) that exports yellowfin tuna or yellowfin tuna products to the United States, and that imports yellowfin tuna or yellowfin tuna products that are subject to a direct prohibition on import into the United States, must certify and provide reasonable proof that it has not imported products subject to the direct prohibition within the preceding six months.”).

76. *Id.* ¶ 3.3 (stating that “[t]he EEC and the Netherlands claimed that the measures taken by the United States under the intermediary nation embargo were a quantitative restriction of tuna and tuna products that was prima facie contrary to Article XI:1 of the General Agreement.”).

77. *Id.* ¶ 5.17.

78. See *id.* ¶¶ 5.26–5.27 (emphasis added).

If however Article XX were interpreted to permit contracting parties to take trade measures so as to force other contracting parties to change their policies within their jurisdiction, including their conservation policies, the balance of rights and obligations among contracting parties, in particular the right of access to markets, would be seriously impaired.

Id.

79. *Id.* ¶ 5.35.

national climate and energy policies having cross border effects. For example, electricity produced by renewable energy, a potentially desirable outcome in terms of greenhouse gas emissions, could not be distinguished from electricity produced by conventional fossil fuels, and, according to the logic of Tuna-Dolphin I and II, could not be used to justify an environmental exception. In the Shrimp-Turtle case (1998), with facts nearly identical to the Tuna-Dolphin cases, regarding a US measure to conserve endangered turtles by banning the import of shrimp caught by a method that did not protect turtles,⁸⁰ the Panel considered the ban measure a Product Process Measure (PPM), and thus an unpermitted quantitative restriction that was prima facie discriminatory.⁸¹ The AB reversed this interpretation, however, and stated that while all domestic measures, even if a PPM, were unilateral measures that tried to impose on others, they may still be justifiable under Article XX⁸² provided the measure then passes all the requirements of the Chapeau.⁸³ While there is a marked preference for internationally negotiated solutions to regional and global environmental problems, as stated in this case and in the WTO rules, it would appear that under such narrow conditions, certain domestic measures, whether product related or a product production measure, related to, but not necessarily primarily aimed at conservation or environmental protection, *may* have extra-territorial application, and *may* have priority over international trade rights.

The Automobile Fuel Efficiency case provides an example of what can happen even when a WTO panel ruling is not adopted or appealed.⁸⁴

80. Panel Report, *United States—Import Prohibition of Certain Shrimp and Shrimp Products*, ¶ 7.11, WT/DS58/RW (June 15, 2001) [hereinafter *Shrimp Panel Report*].

81. *Id.* ¶ 7.49.

82. See Shrimp AB Report, *supra* note 66, ¶ 187(c).

83. *Id.* ¶¶ 173–74.

84. Post 1994, the adoption of Panel Reports takes place automatically unless rejected by consensus. The chance of rejection by consensus is basically non-existent as the injured state is never expected to reject. According to the WTO website:

One Member opposing the adoption of the report is not sufficient, nor is a majority; instead, what is needed to reject (or not to adopt) the panel report is a consensus against adoption by all Members represented at the relevant DSB meeting. In other words, one single Member insisting on adoption is sufficient in order to secure the adoption of the report. Normally, at least one party has an interest in the adoption because, overall, it prevailed with the panel. Even if many panel decisions are mixed in that not all the claims of violation of (WTO) law succeed, there is usually a “winner” (the complainant, if at least one claim is upheld, and the respondent, if all are dismissed) and a “loser” in the formal sense. Because the prevailing party has a natural interest in having the panel’s conclusions become binding upon the parties, the adoption of panel reports is “quasi-automatic”. Thus, rejection by (negative) consensus is more theoretical than real, and has never occurred in the WTO practice to date.

This case arose from litigation against the US Corporate Average Fuel Efficiency (CAFE) standards under the US Energy Policy Conservation Act of 1975, adopted in part for national security and in part to conserve energy.⁸⁵ The CAFE standards required the average fuel-efficiency of all U.S. and foreign manufactured and imported cars to not fall below a given level.⁸⁶ Many European manufacturers met the CAFE standards in the 1970s and early 1980s, but later shifted to a strategy of exporting more profitable, less fuel-efficient luxury cars to the US, voluntarily choosing not to comply with the CAFE standards and, as a result, paid substantial penalties under the national law.⁸⁷ In 1993, Europe challenged the CAFE standards under GATT, claiming that the standards had a negative impact on European manufacturers.⁸⁸ The Panel upheld the challenge, ruling that the measure violated GATT non-discrimination rules, even if there was a non-discriminatory intent.⁸⁹ Despite the fact that the ruling was neither adopted nor appealed, the main implication of this ruling is that if a national rule concerning energy policy for multiple objectives, including environmental protection, is not discriminatory in intent, a party that chooses not to comply with it and then suffers the trade consequences can claim discriminatory effect. This could create an incentive for foreign firms in any country to violate national regulations designed at least in part to protect the environment, and then claim injury under the WTO. The practical effects of this complaint on GHG mitigation were negative as European manufacturers chose to pay the CAFE penalties for 27 years, rather than comply with US environmental

See WORLD TRADE ORGANIZATION, DISPUTE SETTLEMENT SYSTEM TRAINING MODULE: CHAPTER 6, § 6.4, available at http://www.wto.org/english/tratop_e/dispu_e/disp_settlement_cbt_e/c6s4p1_e.htm.

85. The Corporate Average Fuel Economy Standards (CAFE) were enacted under the National Energy Policy and Conservation Act of 1975, revised by the Energy Independence and Security Act of 2007. See Energy Policy and Conservation Act of 1975, PL 94–163, 89 Stat. 871 (codified as amended at 42 U.S.C. § 6201 (2000)). The statement and purpose of the Energy Policy and Conservation Act of 1975 provides: “(4) to conserve energy supplies through energy conservation programs, and, where necessary, the regulation of certain energy uses; (5) to provide for improved energy efficiency of motor vehicles, major appliances, and certain other consumer products.” *Id.*

86. 49 U.S.C. § 32,902 (2007).

87. Auto manufacturers were subject to fines according to the CAFE Regulations. 49 U.S.C. § 32,912 (2007).

88. Panel Report, *United States—Taxes on Automobiles*, ¶ 3.220, WT/DS31/R (Oct. 11, 1994) [hereinafter *Automobile Fuel Efficiency Panel Report*].

89. *Id.* ¶ 6.1.

standards.⁹⁰ In addition, the US agency with jurisdiction to increase the CAFE penalty chose not to so that neither production nor import of these vehicles were discouraged.⁹¹ In the final analysis, the (un-adopted) decisions of this complaint can be considered unsatisfactory as a mechanism for environmental benefits, and puts into doubt the alleged environmental and national security goals of the regulation.

For climate related energy policies, which may be considered extensions of environmental policies, the sum of the cases described above indicates the variety of outcomes possible at the WTO. Recall that international law decisions, such as WTO DSB rulings, are not subject to the principle of *stare decisis*.⁹² Thus, each case with similar facts may be decided in unpredictable ways. There is also a small chance that a Panel Report may be adopted without appeal. On the other hand, the Shrimp-Turtle case seems to indicate a small opening for national environmental, including climate-energy, policies, to be justified as a GATT Article XX exception.

IV. OBLIGATIONS OF COUNTRIES UNDER THE CLIMATE CHANGE REGIME

The main objective of the UN Framework Convention on Climate Change (UNFCCC) is to prevent dangerous human interference with the climate.⁹³ Canada, China, Japan and the US were original signatories and ratified the Convention in 1994.⁹⁴ All parties, taking into account their common but differentiated responsibilities, and national development

90. By November 2010, European auto manufacturers had paid \$794,921,139.50 in penalties since 1983. *See* Summary of CAFE Fines Collected, Nat'l Highway Traffic Safety Admin. (Nov. 29, 2010), http://www.nhtsa.gov/staticfiles/rulemaking/pdf/cale/CAFE_fines_collected_summary.pdf. Only in 2009, after paying fines for over 10 years, did the largest of EU CAFE standard violators, Mercedes-Benz, Inc., announce that it would now introduce models that would comply with the regulations and avoid the large fines they had been paying as well as in anticipation of future more drastic MPG standards in the USA. John O'Dell, *Mercedes Says Its Annual CAFE Fines Are a Thing of the Past*, AUTOOBSERVER.COM (Mar. 12, 2010), <http://www.autoobserver.com/2010/03/mercedes-says-its-annual-cafe-fines-are-a-thing-of-the-past.html>.

91. The original penalty was \$50 per vehicle for every 1 mpg shortfall. This was raised to \$55 in 1997 with no changes since. U.S. GOV'T ACCOUNTABILITY OFFICE, GAO-07-921, VEHICLE FUEL ECONOMY: REFORMING FUEL ECONOMY STANDARDS COULD HELP REDUCE OIL CONSUMPTION BY CARS AND LIGHT TRUCKS, AND OTHER OPTIONS COULD COMPLEMENT THESE STANDARDS (Aug. 2, 2007), *available at* <http://www.gao.gov/products/GAO-07-921>.

92. Guillaume, *supra* note 9, at 14.

93. United Nations Framework Convention on Climate Change art. 2, May 9, 1992, S. Treaty Doc No. 102-38, 1771 U.N.T.S. 107 [hereinafter UNFCCC].

94. *Status of Ratification of the Convention*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/essential_background/convention/status_of_ratification/items/2631.php (last visited Oct. 17, 2011).

priorities, must inventory their anthropogenic emissions and sinks using agreed upon best scientific methods, and formulate and implement programs to mitigate climate change.⁹⁵ The Annex I parties⁹⁶ have committed to adopting national policies to limit anthropogenic GHG emissions and protect and enhance GHG sinks.⁹⁷ Annex I parties must aim to return to 1990 levels.⁹⁸ This is the most explicit substantive commitment beyond the obligations for *all* parties.⁹⁹ Developing countries' (non-Annex I) implementation of obligations depends on the Annex I parties' commitment to finance and transfer technology.¹⁰⁰

All parties must therefore implement climate change mitigation policies as well as be guided by the principle that there be a "supportive and open international economic system[.]" and that measures taken to combat climate change, including unilateral ones, should not constitute a means of arbitrary or unjustifiable discrimination or a disguised restriction on international trade."¹⁰¹ This provision harmonizes the UNFCCC with the non-discrimination principles of the WTO. But how this provision works in practice, with the very different substantive requirements undertaken by each country to reduce traditional energy use and GHGs, is far from obvious and clearly needs to be developed. All countries must take unilateral action under the UNFCCC, which can have a de facto discriminatory effect on trade, as will be seen below. The UNFCCC itself does not address the effects of non-compliance, although the preamble refers to the no-harm principle.¹⁰²

The Kyoto Protocol¹⁰³ further requires Annex I states to ". . . individually or jointly, ensure that their aggregate anthropogenic carbon dioxide equivalent emissions of the greenhouse gases listed in Annex A do not exceed their assigned amounts given in Annex B . . . with a view to reducing their overall emissions of such gases by at least 5 per cent

95. Kyoto Protocol to the United Nations Framework Convention on Climate Change art. 4(1), Dec. 10, 1997, 37 I.L.M. 22 [hereinafter Kyoto Protocol].

96. The Annex I parties are all the EU countries, Australia, Belarus, Canada, Croatia, the European Economic Community, Japan, New Zealand, Russian Federation, Switzerland, Turkey, and the United States. UNFCCC, *supra* note 93, annex I.

97. Kyoto Protocol, *supra* note 95, art. 4(2).

98. *Id.* art. 4(2)(b).

99. *Id.*

100. UNFCCC, *supra* note 93, art. 4(3).

101. Kyoto Protocol, *supra* note 95, art. 3(5).

102. *See* UNFCCC, *supra* note 93, pmb., § 8.

103. Kyoto Protocol, *supra* note 95.

below 1990 levels in the commitment period 2008 to 2012.”¹⁰⁴ Under this scheme, Japan has committed to a 6% reduction of greenhouse gases below 1990 levels, and Canada to an average 6% decrease below 1990 levels.¹⁰⁵ The US as an original signatory but not a member of the Kyoto Protocol has not taken on specific quantitative reduction targets.¹⁰⁶ China, a non-Annex I party, was an original signatory and ratified the Protocol, with concurrent obligations for non-Annex I parties.¹⁰⁷

To meet their obligations under the Kyoto Protocol, Annex I parties must implement measures listed non-exhaustively in Article 2, such as: “(i) Enhancement of energy efficiency in relevant sectors of the national economy; (iv) . . . promotion, development and increased use of, new and renewable forms of energy, of carbon dioxide sequestration technologies . . . ; and (vii) Measures to limit and/or reduce emissions of greenhouse gases . . . in the transport sector.”¹⁰⁸ All parties must “[f]ormulate, implement, publish and regularly update national and, where appropriate, regional programmes containing measures to mitigate climate change . . . “where “[s]uch programmes would, inter alia, concern the energy, transport and industry sectors as well as agriculture, forestry and waste management.”¹⁰⁹

Therefore, with or without the ratification of the Kyoto Protocol, the climate regime requires that all member states adopt measures on energy efficiency and alternative energy as principle measures to mitigate climate change. These measures affect nearly all sectors of the local, regional, national and global economy.¹¹⁰ For example, China, as a non-Annex I state, while it does not commit to quantifiable GHG reductions by 2012, or aim to achieve 1990 levels at some unspecified date, is nonetheless obliged to formulate and implement climate change mitigation measures concerning energy, transport and industry, among others. The obligations of China under the climate regime appear to be somewhat less onerous, and largely in terms of procedural requirements, than those of the US. The US, as only an Annex I UNFCCC member, must “only” aim to achieve 1990 levels by an unspecified date. The practical difference

104. *Id.* art. 4(2)(b).

105. *Kyoto Protocol Targets*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/kyoto_protocol/items/3145.php (last visited Oct. 17, 2011).

106. *Status of Ratification of the Kyoto Protocol*, UNITED NATIONS FRAMEWORK CONVENTION ON CLIMATE CHANGE, http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php (last visited Oct. 17, 2011).

107. *Id.*

108. Kyoto Protocol, *supra* note 95, art. 2(1)(a).

109. *Id.* art. 10.

110. As energy and GDP are closely related. *Merchandise Trade*, *supra* note 14; *see also supra* Figure 1(a).

between “aim to achieve 1990 levels” and “must adopt measures to mitigate” is arguably negligible. In effect, the substantive international climate change obligations for the US, as an Annex I party, and China as a non-Annex I party, appear to be similar.

The UNFCCC has no provision or mechanism to address the benefits of the consequences of countries’ climate-related energy policies with trade and development goals.¹¹¹ For all countries, a lower carbon future requires switching from fossil fuel sources to less carbon intense energy sources. Additionally, becoming more energy efficient requires increasing the energy efficiency of goods and services. To happen quickly, both of these major developmental changes require large investment. The general practices for these purposes are government intervention through financial mechanisms such as subsidies,¹¹² as well as command and control mechanisms such as energy efficiency standards for goods. But what happens when some states create standards for globally traded products that are significantly more energy efficient than others? Must all other countries producing equivalent goods reach the same energy efficiency standards or might those states that are producing more energy efficient goods be forced to lower those standards due to the potentially negative effects on global trade? In other words, what is the effect on global trade when countries that are not obliged to do so under the international climate change regime subsidize clean energy industries or may even be permitted to raise their levels of energy use and emissions?¹¹³ Can such countries’ energy policies flood the global market with cheaper clean energy goods—an environmentally desirable situation—and become internationally liable for the effects on the global trading system?

V. UNRESOLVED NATIONAL ENERGY AND CLIMATE CHANGE POLICY COMPLAINTS AT THE WTO AND POSSIBLE SOLUTIONS

The potential effects of WTO resolution of climate related energy policies can be illustrated through analysis of three existing unresolved complaints. The Greenhouse Gas Controversy is an older energy policy

111. The only provision relating climate policies and international trade is a non-discrimination provision. See UNFCCC, *supra* note 93.

112. *The Global Revival of Industrial Policy: Picking Winners, Saving losers*, THE ECONOMIST, Aug. 5, 2010, available at <http://www.economist.com/node/16741043>.

113. Annex B of the Kyoto Protocol provides member states’ allowable emissions. Iceland, for example, was permitted to raise its emissions within the compliance period by 10 %. Kyoto Protocol, *supra* note 95, annex B.

based complaint¹¹⁴ that provides a useful example to assess what the outcomes may look like should it be re-activated or similar complaints arise. In 1999, the EU and the US (acting on behalf of Ford and Daimler-Chrysler) threatened WTO action against the Japan's Top Runner Program adopted under its 1979 Law for the Rational Use of Energy, and revised in main part to fulfill Japan's Kyoto Protocol obligations.¹¹⁵ The Top Runner Program established energy efficiency standards for a variety of products, including medium-weight automobiles, and has been proven to be the most effective globally to meet the multiple objectives of reduction of fuel imports, climate change mitigation and cost effectiveness.¹¹⁶ Thus, Mitsubishi Motors produced the most fuel efficient and lowest GHG emitting cars, whereas 90% of the medium-weight imports were of EU/US origin, which would have to reach the efficiency standards met by Mitsubishi by a given date or face penalties.¹¹⁷ The EU/US complained that this measure was unnecessarily trade-restrictive under the TBT.¹¹⁸

A second complaint was received in September 2010 when Japan requested consultations with Canada¹¹⁹ regarding Ontario's measures relating to domestic content requirements in the Feed-in Tariff Program (FIT Program). Japan has claimed that the measures are inconsistent with Canada's obligations under GATT Article III because "they appear to be laws, regulations or requirements affecting the internal sale, offering for sale, purchase, transportation, distribution, or use of equipment for renewable energy generation facilities that accord less favorable treatment to imported equipment than the treatment accorded to like products originating in Ontario."¹²⁰ Japan also alleges the measures could be internal quantitative regulations requiring the mixture, processing or use of a specified amount or proportion of equipment for renewable energy

114. Peter Constantini, *What's Wrong With the WTO? WTO Controversies*, SPEAKEASY.ORG (Nov. 2001), <http://www.speakeasy.org/~peterc/wtow/wto-cont.htm>.

115. Act Concerning the Rational Use of Energy, Act No. 49 of 1979, art. 1-3 (Japan).

116. In recognition of the effectiveness of this program, Germany's new 2011 energy strategy will seek to emulate that for products in Germany. *Der Weg zur Energie der Zukunft –sicher, bezahlbar und umweltfreundlich*, BUNDESMINISTERIUM FÜR WIRTSCHAFT UND TECHNOLOGIE, <http://www.bmu.de/energiewende/doc/47465.php> (last updated June 6, 2011).

117. Constantini, *supra* note 114.

118. Bruce Barnard, *European Carmakers to Challenge Japan at WTO*, THE JOURNAL OF COMMERCE (Dec. 21, 1998, 7:00 PM), http://www.joc.com/maritime-news/european-carmakers-challenge-japan-wto_19981221.html.

119. *Canada–Measures Relating to the Feed-in-Tariff Program*, World Trade Organization, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds426_e.htm (last visited Mar. 15, 2013).

120. *Id.*

generation facilities, be supplied from Ontario sources.¹²¹ Japan argues that this affords protection to Ontario production of such equipment, contrary to the non-discrimination principles of GATT.¹²² Japan has further alleged that the measure is a prohibited subsidy as a financial contribution or a form of income or price support, and a benefit is thereby conferred that appears to be provided “contingent . . . upon the use of domestic over imported goods” under Articles 3.1(b) and 3.2 of the SCM Agreement.¹²³

A third complaint was brought in December 2010 by the US against Chinese wind energy subsidies based on a petition by the United Steelworkers to the US government for WTO action.¹²⁴ This complaint alleged that actionable subsidies in China¹²⁵ to promote their domestic

121. *Id.*

122. *Id.*

123. As of August 2011, the European Union has also requested consultation with Canada on Measures Relating to the Feed-in-Tariff program. *Id.*

124. See *United Steelworkers’ Section 301 Petition Demonstrates China’s Green Technology Practices Violate WTO Rules*, UNITED STEELWORKERS, <http://assets.usw.org/releases/misc/section-301.pdf> (last visited Mar. 15, 2013) [hereinafter *U.S. Steelworkers’ Complaint*] (only the Executive Summary of the reported 5,800 page long United Steelworkers 301 Petition is available). Based on the Petition, the United States Office of the Trade Representative launched an investigation on October 15, 2010 that ended in December 22, 2011 with the complaint submitted to the WTO. See *United States Launches Section 301 Investigation into China’s Policies Affecting Trade and Investment in Green Technologies*, OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE (Oct. 2012), <http://www.ustr.gov/node/6227>.

125. China adopted its national energy and climate strategy as part of its 12th Five Year Plan on March 2011 with targets to reduce energy intensity (16% reduction by 2015 of 2005 level, 40-45% by 2020) and CO₂ emissions per unit GDP (17% reduction by 2015). In its 2009 Renewable Energy Law, which took effect in April 2010, China authorized feed-in tariffs for on-shore wind based on geographical wind distribution, and biomass and set a target of 100 Gigawatts of wind power capacity by 2020. The lowest wind tariff is RMB0.51/kWh (7.5 US cents/kWh) for the best wind resources of Inner Mongolia and parts of Xinjiang. The rates decrease to RMB0.54/kWh (7.9 US cents/kWh), RMB0.58/kWh (8.5 US cents/kWh) and RMB0.61/kWh (9.0 US cents/kWh with decreasing wind strength). The tariff for biomass now is RMB0.35/kWh (5.2 US cents/kWh). In 2006, China increased to 15% the target share of renewables, including nuclear, in its final energy consumption, up from the previous 8% target. See Deborah Seligsohn & Angel Hsu, *China Releases 12th Five Year Plan*, SUSTAINABLE BUSINESS, <http://www.sustainablebusiness.com/index.cfm/go/news.display/id/22006> (last updated Mar. 8, 2011); see also Renewable Energy Law of the People’s Republic of China (promulgated by the Standing Comm. Nat’l Peoples Cong., Feb. 28, 2005, effective Jan. 1, 2006), ST. COUNCIL GAZ. Issue 11, Serial No. 1154 (China), translated at <http://www.ccchina.gov.cn/en/NewsInfo.asp?NewsId=5371> [hereinafter REL 2006], amended by Decision of the Standing Committee of the National People’s Congress on Amending the Law of the People’s Republic of China on Renewable Energy

renewable energy industry have injured the US steel industry and associated industries by displacing US wind industry component exports to China by 67%–81% and to the EU by 30%.¹²⁶ For solar cells and panels, such subsidies are alleged to have caused the global price to drop by 40%, China to achieve 34% market share in the EU, displacing the US share of exports to the EU to 3.7%.¹²⁷ Moreover, the subsidies are alleged to have caused US panel makers to shift production to China in 2009 and 2010, leading to national economic losses.¹²⁸

A. *Potential Solutions, Signals for National Energy Policies and International Liability*

How may these complaints be resolved at the WTO and what signals do they send for national climate related energy policies? Applying the reasoning of the Automobile Fuel-Efficiency Case to the GHG Controversy for example, the DSB could find that the measure, despite its probable motive to protect the climate, or its likely non-discriminatory intent, has negative trade consequences, or is in effect discriminatory, specifically towards EU auto manufacturers, and thus fails GATT Article XX tests. Alternatively, or in addition, the measure may be found un-necessarily trade restrictive under the TBT. The measure may need to be withdrawn, made less stringent in terms of emissions standards, or applied differently.¹²⁹ If Japan were to withdraw or lower its energy efficiency standards, the EU, through the WTO, would be forcing Japan to change its climate protective energy policies. A second possible outcome for an un-necessarily trade restrictive measure under the TBT would be for Japan to cooperate with the EU and US importers, assisting them to achieve compliance.¹³⁰ This is costly and time consuming for

(promulgated by the Standing Comm. Nat'l People's Cong., Dec. 26, 2009, effective Apr. 1, 2010), 2009 China Law LEXIS 671 (China) [hereinafter Amended REL 2009]; see also Eric Martinot & Li Junfeng, *Renewable Energy Policy Update for China*, RENEWABLE ENERGY WORLD (July 21, 2010), <http://www.renewableenergyworld.com/rea/news/article/2010/07/renewable-energy-policy-update-for-china>.

126. See Matthew L. Wald & Keith Bradsher, *4 U.S. Makers of Towers for Wind Turbines File Complaint Over China's Steel Subsidies*, N.Y. TIMES, Dec. 29, 2011, at B2.

127. See *id.*

128. See *id.*

129. See Shrimp AB Report, *supra* note 66, ¶¶ 172, 186 (countries must respect the rights of other member states and seek to consult and negotiate a regional or international solution to transboundary environmental issues).

130. *Id.* ¶ 168. Under this interpretation, Japan would most likely have to seriously seek to negotiate international technical standards, or seek to harmonize their national technical standards with those of other countries.

Japan, making Japan indirectly liable for its stronger climate related energy policies.

Alternatively, if the measure could be considered more trade restrictive than necessary, a different outcome would be for Japan to ignore the ruling and pay fines to the EU and US as countermeasures authorized to the latter by the WTO.¹³¹ Japan would become liable in effect for international trade effects of its leading climate mitigation regulations and again, a negative signal would be sent to climate mitigating national energy policies worldwide.

In yet another possible outcome, Japan's Top Runner efficiency standards would be permitted to stand under international trade law. Unless the EU/US met the standards within a given period of time, Japan could either use domestic sanctions against the imports, or request sanctions through the WTO countermeasure systems. Domestic sanctions over many years, even if self-inflicted, do not necessarily lead to climate mitigation.¹³² The EU/US, through trade losses and costs of meeting higher environmental standards that in this case, the US did not sign up for, may be forced to change their energy policies to meet higher environmental standards. Meanwhile, Japan's ability to meet its international Kyoto obligations would be restricted. Therefore, regardless of the ability of national energy policies to promote climate mitigation, the DSB would have the power to change the direction of either parties' national energy policies.

With no direct DSB guidance on the consistency of national subsidies to promote environmentally protective measures, the potential outcomes for resolution of the Feed-in Tariff (FIT) and the Subsidies for Wind complaints are more speculative than for the GHG controversy based on (energy efficiency) standards which clearly fall under the TBT or GATT. If the Feed-In Tariffs are shown contingent on local content requirements as alleged by Japan, this requirement for domestic content would be sufficient to make at least parts of the FIT prohibited, if not the whole FIT program, under the SCM. On the other hand, the FIT is labeled as a program for government procurement and may fall outside of the SCM altogether. Note that Japan is not complaining about the FIT program as a whole. But establishing the existence of actionable subsidies in the wind complaint is even more problematic under the narrower definition

131. See *supra* pp. 211–12.

132. See Reformulated Gasoline AB Report, *supra* note 67, at 21.

of subsidies in the SCM. The subsidies must be shown to be contributions by government to specific industries. Such contributions would be actionable upon proof that either adverse effects or serious harm is caused to the trading partner's interests. Thus, the Steelworkers Union has alleged that adverse effects and serious harm was caused to the US wind and solar industry as well as depressed prices worldwide. The WTO DSB may consider whether this harm is sufficiently serious against the arguably environmentally desirable outcome that the widespread use of low carbon energy the subsidies would cause. The DSB may also attempt to balance a national energy policy implemented largely for the development of a nascent Chinese industry, with large global environmental co-benefits, and at least partly adopted to meet UNFCCC obligations, against discriminatory behavior towards trading partners.

Where subsidies are found to seriously injure or have adverse effects on other members, their adverse effects must be removed within a specified time. There are examples where both prohibited subsidies and actionable subsidies have nonetheless been maintained, leading to large sanctions through countermeasures. For example, in the Foreign Sales Corporation (FSC) case,¹³³ the US faced \$4.3 billion in suspended tariff concessions and other WTO obligations to the EU for failure to comply with repeated AB decisions on prohibited subsidies (no taxes on exports of US companies into the US). In the Upland Cotton case, which spanned a period from 2002 to 2009, prohibited actionable subsidies on cotton in the US that made cotton exceptionally cheap on the global market and hurt Brazilian cotton producers, which were authorized \$294.7 million in concessions as well as additional TRIPS rights suspensions worth more than \$800 million.¹³⁴ In August 2010, Brazil and the US concluded an agreement in return for not imposing countermeasures in the Upland Cotton case.¹³⁵ These cases are indicative of situations where the countermeasures and substantial fines are tolerated by the violating state for subsidies. If such an approach were maintained by China in the wind subsidies case, or Canada in the FIT case, we have a situation not unlike the Automobile Fuel Efficiency case, where fines are paid for trade violations, without environmental, climate and energy

133. *United States–Treatment for “Foreign Sales Corporations”*, WORLD TRADE ORGANIZATION, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds108_e.htm (last visited Mar. 3, 2013).

134. *See United States–Subsidies on Upland Cotton*, WORLD TRADE ORGANIZATION, http://www.wto.org/english/tratop_e/dispu_e/cases_e/ds267_e.htm (last updated Sept. 21, 2010).

135. *Id.*

resource benefits and possibly defeating the climate related policy goals of national law.

The wind energy subsidies complaint was preliminarily resolved in June 2011 at the consultation stage when China withdrew the controversial measure.¹³⁶ But not without repercussions: other US renewable energy manufacturers have filed similar complaints with the US Department of Commerce and the US International Trade Commission against Chinese wind energy companies alleging subsidies leading to dumping prices. These complaints can lead to similar new complaints by the US against China at the WTO.¹³⁷ In response to the uncertainty of how these complaints will be handled, a Chinese solar energy company is reported to have frozen solar installations in the US worth \$500 million, affecting US solar installers and developers who benefit from cheaper panels.¹³⁸ As a matter of procedure, this SCM case based on allegations of *prohibited* subsidies would be processed faster than the Feed-In Tariff complaint related to actionable subsidies. The SCM provides for longer time for reporting, appeal, and potential arbitration of actionable subsidies than for prohibited subsidies.¹³⁹ While this time lag could be a good thing for climate benefits, especially in rapidly developing countries highly dependent on petroleum, countries harmed in trade, in this case the US, would have to contend with future trade losses unless the Chinese provisions were removed.

It is ironic that, as stated in the US Steelworkers complaint, “From 2008 to 2009, U.S. demand for solar power grew by a healthy 41% . . .”¹⁴⁰ This was likely due at least in part to the reported growth during this time in low cost Chinese solar panels.¹⁴¹ From a climate change mitigation perspective, a desirable scenario would be for low cost Chinese renewable energy products to lead to a large uptake worldwide of renewable energy. This would more rapidly promote the global conversion to a low carbon

136. *China Ends Wind Power Equipment Subsidies Challenged by the United States in WTO Dispute*, OFFICE OF THE UNITED STATES TRADE REPRESENTATIVE, <http://www.ustr.gov/about-us/press-office/press-releases/2011/june/china-ends-wind-power-equipment-subsidies-challenged> (last updated June 2011).

137. Wald & Bradsher, *supra* note 126.

138. Paul Jones, *Chinese Solar Company Freezes Installations*, L.A. DAILY JOURNAL, Nov. 9, 2011, at 7.

139. SCM, *supra* note 26, art. 4.9.

140. See *U.S. Steelworkers Complaint*, *supra* note 124.

141. The complaint notes that panel imports from China nearly doubled in this period. *Id.*

economy. It can be argued that such WTO complaints by one or more affected countries could be inducing China to breach globally desirable substantive UNFCCC obligations, the very obligations China, and other developing countries like China, have been accused of not having to meet.¹⁴² Another possible outcome is that even the complaining state's uptake of cheaper alternative energy resources may be jeopardized in favor of more expensive local products. However, even without specific obligations under the UNFCCC regime, most countries, whether developed or developing, large or small, have specific or general commitments under the climate change regime.¹⁴³ These countries look to each other for best practices that promote energy efficiency and the movement towards a globally lower carbon economy.¹⁴⁴ They also employ similar policy and regulatory mechanisms, sometimes in conjunctions with local content rules, such as renewable energy targets, financial incentives, technical efficiency standards, carbon taxes.¹⁴⁵ Such national measures that affect international trade may cause harm to the development and trading

142. See generally, e.g., STAFF OF H. COMM. ON ENERGY AND COM., 110TH CONG., CLIMATE CHANGE LEGIS. DESIGN WHITE PAPER: COMPETITIVENESS CONCERNING ENGAGING DEVELOPING COUNTRIES 1-2 (Comm. Print 2008), available at <http://www.fws.gov/southeast/climate/policy/Climate%20Dingell%202nd%20White%20Paper%20Competitiveness%20013108.pdf>.

143. See generally *supra* p. 19.

144. A widely used policy for rapidly increasing the uptake of renewable energy share is the feed-in-tariff. Starting in the European Union, especially Germany's successful deployment, renewable energy is being touted globally and copied. See Ashley Seager, *Germany Sets Shining Example in Providing a Harvest for the World*, THE GUARDIAN (July 23, 2007), <http://www.guardian.co.uk/business/2007/jul/23/germany.greenbusiness>.

145. For example, India and the Ukraine have promulgated potentially prohibited and actionable subsidies. For India, see Gov't of India, Ministry of New and Renewable Energy, *Jawaharlal Nehru National Solar Mission Towards Building SOLAR INDIA*, MINISTRY OF NEW AND RENEWABLE ENERGY, 3, http://www.mnre.gov.in/file-manager/UserFiles/mission_document_JNNSM.pdf (last visited Mar. 16, 2013). India, with a potentially very large solar energy market, has promulgated a law that solar modules must be produced in India to gain FIT under the JNNSM. Abhishek Shah, *Solar Energy Protectionism—Italy Joins India, Canada in Formulating Domestic Content Requirements*, GREEN WORLD INVESTOR (May 10, 2011), <http://www.greenworldinvestor.com/2011/05/10/solar-energy-protectionism-italy-joins-indiacanada-in-formulating-domestic-content-requirements/>. This law is also expected to become stricter with future solar cells produced in the country, drawing protest from the US, which has itself faced protest for minimal domestic content rules in subsidies under the ARRA. See David T. Ralston, Jr. & Jeffrey R. Blease, "Buy American" Provision in Stimulus Legislation Poses Serious Compliance Challenges for Public Works Contractors and DHS Suppliers, FOLEY & LARDNER LLP (Feb. 17, 2009), <http://www.foley.com/buy-american-provision-in-stimulus-legislation-poses-serious-compliance-challenges-for-public-works-contractors-and-dhs-suppliers-02-17-2009/>. Ukraine became the latest country to include local content requirements for feed-in-tariffs for renewable energy projects increasing domestic content requirements over time. See *Ukraine Stimulates Usage of Alternative Energy Sources With Revised Green Tariff Rules*, SQUIRE SANDERS (Apr. 2009), http://www.ssd.com/ukraine_law_alert_april_2009/.

interests of other states even *without* participation in the Kyoto Protocol, as shown by the US complaints,¹⁴⁶ or *with* stellar participation in the Kyoto Protocol, as shown by the complaint against Japan.¹⁴⁷ In the case of China, signals are sent that promoting low carbon alternative energy is not desirable in terms of international trade, and that China can become indirectly liable for just those policies, even when environmentally desirable. In the case of Japan, the most energy efficient products could be shown to be similarly undesirable when traded globally, and Japan may become liable for trading environmentally desirable goods. Canada, by restricting international trade competition that is favorable to climate protection, must now face potential international trade liability at the WTO. Finally, the US, while pushing for environmentally desirable outcomes in cases like Tuna-Dolphin, Shrimp Turtle, or Automobile Fuel, must now decide what signals it wants for itself in terms of international trade (non) liability by potentially resulting in fewer environmentally desirable goods in the global market, but at the same time potentially facing much greater responsibility in the future by contributing further and decreasing the global potential to change to a lower carbon world.

Thus for all countries, participation in the WTO with implementation of climate-energy policies becomes the basis for: (1) disputes that must be resolved by balancing global climate concerns and international trade law rights and duties; (2) resolution of disputes that signal the direction of national climate-related energy policies; (3) state liability through trade remedial measures; and (4) potentially longer-term state responsibility for climate damage.

VI. CONCLUSION

In 2008 one observer wrote, “[i]n particular, with a US climate policy in place, goods from countries without mandatory carbon restrictions—such as China, Brazil or India—may gain a price advantage over US goods. It is exactly this asymmetry that led the US Senate to reject the

146. *E.g.*, Ben Lefebvre, *EU Tariffs on US Biodiesel Spark Debate*, ICIS.COM (Apr. 22, 2009), <http://www.icis.com/Articles/2009/04/22/9209905/eu-tariffs-on-us-biodiesel-spark-debate.html> (describing how the European Union applied antidumping duties in 2009 to U.S. biodiesel in reaction to subsidies for U.S. biofuel producers, which caused the price of U.S. biofuel to undercut European produced biofuel); *see also* Energy Policy Act of 2005, Pub. L. No. 109-58, 119 Stat. 594 (providing subsidies for U.S. producers of biofuels).

147. *See generally* Constantini, *supra* note 114.

Kyoto Protocol. The competitiveness impact of US climate policy may play out both at home (on the US market) and abroad (on world markets).”¹⁴⁸ However, contrary to this observer’s assumption that the *basis* would be that the US has mandatory climate restrictions, and China does not, has *not* turned out to be the case. The main argument for US non-participation in the Kyoto Protocol, or similar obligations in the future, becomes moot, as China, the largest developing country, has also adopted national climate-related energy strategies. With China entering the global renewable energy market in an aggressive way, Japan at the forefront of energy efficiency goods, or other developed countries taking protective local measures to develop their own nascent renewable energy sectors, a competitive trading situation has arisen globally that has sparked controversies at the WTO.

Though not excluding the possibility that climate change litigation will arise through other international fora, this paper has shown that the WTO has become a significant international venue to channel complaints related to national climate-related energy regulations. The WTO thus faces a challenging opportunity to grapple with and balance the national regulation of climate change and international trade. Past DSB rulings on environment and trade can have differing and inconsistent outcomes. Similar inconsistencies are possible in cases related to climate change, such as the greenhouse gas controversy (Japan/EU/US), the feed-in tariffs complaint (Japan/Canada), and the wind subsidies complaint (US/China). Depending on the outcome, countries may not have a trade advantage if they promote energy policies based even partly on climate mitigation. In addition the complainant or defendant could become liable for climate change, either directly or indirectly, through WTO countermeasures, national enforcement and penalties, or WTO authorized compensation. Whether a party, or both parties, become indirectly liable for their climate-related energy policies depends on whether the national energy conserving or climate measure can be considered a GATT Article XX exception, a TBT Article 2.2 exception, or it requires the complex task of deciding on the acceptability of SCM subsidies under WTO law. To note is that a complaining party need not have a direct legal interest to bring a case to the WTO. If a member’s behavior could be shown to affect another member’s rights, any member affected by a measure would have a similar right to fight the measure.¹⁴⁹

148. Joost Pauwelyn, *U.S. Federal Climate Policy and Competitiveness Concerns: The Limits and Options of International Trade Law 2* (Nicholas Inst. for Envtl. Policy Solutions, Working Paper No. 07-02, 2007) (emphasis removed).

149. Andrea Bianchi & Lorenzo Gradoni, *Developing Countries, Countermeasures and WTO Law: Reinterpreting the DSU against the Background of International Law*,

The WTO has shown a willingness to attempt to balance trade and environmental issues on a case-by-case basis and has the power to mandate the direction of climate-related energy policy. Where a case involves large energy consumers, such as the US or China, a WTO decision can have significant global environmental effects. The WTO has become a significant forum to achieve some progress where international climate change negotiations have not. Although WTO provisions and the DSB lend strong support for the preferential development of global solutions, the DSB cannot wait for long-term negotiated solutions when faced with immediate international trade complaints based on national climate-related energy policies. At the same time, the WTO has no prescribed mechanism to weigh the effects of its decisions on a countries' energy and climate policies, nor a duty to observe precedent in their jurisprudence. Therefore, lacking negotiated solutions to global energy and climate change issues, the effect of the WTO's decisions on national climate mitigating energy policies, associated effects on global climate change mitigation, liability through trade "sanctions," and long term effects on state responsibility should be closely watched.

ICTSD DISPUTE SETTLEMENT AND LEGAL ASPECTS OF INT'L TRADE (Int'l Ctr. for Trade and Sustainable Dev., Geneva, Switzerland), Dec. 2008, at 13.