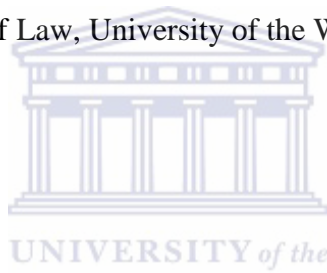


UNIVERSITY OF THE WESTERN CAPE

FACULTY OF LAW

***THE INTERACTION BETWEEN TRADE AND CLIMATE CHANGE LAW AND
POLICY: FROM POTENTIAL CONFLICT TO MUTUAL SUPPORTIVENESS***

(A research paper submitted in partial fulfillment of the requirements for the LLM degree in
the Faculty of Law, University of the Western Cape)



Candidate: NTUMBA BATSHI Sylva

Student No.: 2925661

Supervisor: Professor T.P. Van Reenen

Date: July 27th, 2012

DECLARATION

I declare that “*the interaction between trade and climate change law and policy: from potential conflict to mutual supportiveness*” is my own work, that it has not been submitted for any degree or examination in any other university, and that all the sources I have used or quoted have been indicated and acknowledged by complete references.

Ntumba Batshi Sylva



AKNOWLEDGEMENTS

I would like to extend my utmost gratitude to my supervisor Tobias P. Van Reenen, people from the library, family and friends for assisting and encouraging me with their invaluable support.



DEDICATION

To my late father BATSHI KABASELE Francois and my brother KABASELE Cele, may your souls rest in peace.

TABLE OF CONTENTS

Declaration	i
Acknowledgements	ii
Dedication	ii
Table of contents	iii-v
List of Abbreviations and Acronyms	vi- vii
Key Words	vii
Chapter 1: Introduction.....	1-9
1. Background to the Research	1-2
2. Research Problem	3
3. Rationale of the Research	4
4. Theoretical Assumption	5
5. Research Hypothesis	6-7
6. Scope of the Research	7
7. Research Objectives	7-8
8. Research Methods	8
9. Significance of the Study	8-9
10. Outline of Chapters	9
Chapter 2: Interaction between the trade and climate change regimes	10-21
2.1. Introduction	10-11



2.2. Relationship between the WTO Agreements and the UNFCCC/Kyoto Protocol	11-14
2.3. Fundamental difference between the two regimes	14-15
2.4. Possible joint solutions within the WTO and UNFCCC	15-16
2.4.1. Solutions within the WTO	16-17
2.4.2. Solutions within the UNFCCC	18-20
2.5. Conclusion	20-21
Chapter 3: Relevant Provisions under WTO law	22-33
3.1. Introduction	22-23
3.2. Non-discrimination principle	23-25
3.2.1. National treatment	23-24
3.2.2. Most-Favored nation clause	24-25
3.2.2.1. Definition of like product	24-25
3.3. GATT Article XX	25-32
3.3.1. Environmental law and policies covered by Article XX	26-27
3.3.2. Degree of connection between the means and the environmental law and policy objectives	28-30
3.3.3. The importance of the manner in which trade-related environmental law measures are applied	30-32
3.4. Conclusion	32-33
Chapter 4: National law and policy options available to State	34-46
4.1. Introduction	34
4.2. Energy/GHG Taxes	34-35
4.2.1. Gasoline Tax	35
4.2.2. Automotive Fuel economy Tax	35
4.2.3. Fuel carbon Tax	36



4.2.4. Process-Based Electricity Tax	36
4.2.5. Tax on energy used	37-39
4.3. Product Regulations and Standards	39-43
4.3.1. Fuel Economy Regulation	40
4.3.2. HFC Regulation	41
4.3.3. Voluntary Standard	41
4.3.4. Climate labeling	41-43
4.4. Subsidies	43
4.5. Domestic Emissions Trading	44-45
4.6. Conclusion	46
Chapter 5: Conclusions and Recommendations	46-50
5.1. Conclusions	46-48
5.2. Recommendations	48-50
Bibliography	51-57



LIST OF ABBREVIATIONS AND ACRONYMS

BAMs: Border Adjustment Measures

BTU: British Thermal Unit

CDM: Clean Development Mechanism

CFCs: Chlorofluorocarbons

CTE: Committee on Trade and Environment

COP: Conference of the Parties

FTAs: Free Trade agreement

GATT: General Agreement on Tariff and Trade

GATS: General Agreement on Trade in Services

GHG: Greenhouse Gas

HFC: Hydro-fluorocarbons

KP: Kyoto Protocol

MEAs: Multilateral Environmental Agreement

MFN: Most Favoured Nations

IPCC: Intergovernmental Panel on Climate Change

ISO: International Standard Organisation

ODSs: Ozone Depleting Substances

PPMs: Process and Production Methods

SCM: Subsidies and Countervailing Measures

SPS: Sanitary and Phytosanitary Measures

STO: Specific Trade Obligations



TBT: Technical Barriers to Trade

TEDs: Turtle Excluder

VCLT: Vienna Convention of the Law of Treaty

UNCED: United Nations Conference on Environment and Development

UNEP: United Nations on Environment and Development

UNFCCC: United Nations Framework Convention on Climate Change

WTO: World Trade Organisation

KEY WORDS

Climate change

Conflict

Environmental law

General Agreement on Tariff and Trade

Greenhouse gas mitigation

International law

International trade

Mutual supportiveness

Sustainable development

World trade organization



CHAPTER I

INTRODUCTION

1. BACKGROUND TO THE RESEARCH

Trade and climate change intersect in many ways. Aside from the broad debate as to whether economic growth and trade adversely affect the environment, linkages are recognized between existing rules of the World Trade Organization (WTO) and rules established in various multilateral environmental agreements (MEAs). Controlling greenhouse gas (GHG) emissions promises to be a top priority on both national and international agendas, and special attention has been given to the relationship between the WTO and the emerging international regime on climate change.

To date, multilateral efforts to liberalize trade and to prevent global warming have proceeded largely on separate paths. Increasingly, however, these parallel regimes, one defined by the agreement establishing the WTO and its annexes, the other by the United Framework Convention on Climate Change (UNFCCC) and its Kyoto Protocol (not yet in force) are likely to come into closer contact as climate change policies lead to significant economic effects. Already, a significant potential for conflict exists between the two regimes and the interests they represent.¹ Yet there are also a number of important synergies that can be better developed.

The link between climate change policy and international trade regulation is even closer. Climate change policy, pursuing climate change mitigation and adaptation goals, might need to use trade restrictive measures, which might even be authorized by a future international climate agreement. At the same time, trade-related measures of climate change policy have to comply with the rules of WTO law. However, trade rules do not only set constraints on climate policy, they also offer opportunities. They can be a tool for climate change policy to achieve its objectives.² WTO rules and trade measures (tariffs, taxes, subsidies, etc) can be used to facilitate the transfer of green technologies, use of alternative energies sources, and reductions in the carbon content of trade.

¹ Brewer, Thomas L. (2003). "The trade regime and the climate regime: Institutional Evolution and Adaptation". *Climate Policy*, 3: 329-341.

² Bacchus, James (2010), "*questions in search of answers: trade, climate change, and the rule of law*". Keynote address to the conference on "climate change, trade and competitiveness: issues for the WTO", Geneva, 16 June 2010, available at <http://www.gtlaw.com/portalresource/bacchus1> (accessed on 17 May 2011).

Trade measures have already considerably contributed to climate change mitigation under the Montreal Protocol international system of ozone layer.³ Some estimates show that the Montreal Protocol has reduced GHG emissions four times as much as is intended by the Kyoto Protocol.⁴ The success of ozone emissions reductions is largely attributed to the threat of trade measures (export and import bans) foreseen by the Montreal Protocol.⁵

The UNFCCC and its Kyoto Protocol do not prescribe the use of trade measures. However, in the absence of an agreement on climate change actions at an international level, countries that have undertaken emission reduction commitments and introduced emissions trading and tax systems are likely to use trade measures to level the playing field for their producers and prevent transfer of emissions to countries with lax emissions controls. The most popular idea is to restrict the carbon content of imported products in the form of border adjustment measures, such as, an emission allowance requirement for an importer, import emission tax, an emission-intensity standard applied to imports, etc.

The unilateral use of carbon-related import restrictions risks triggering retaliation by trading partners. It also raises questions about whether such trade measures are consistent with countries' obligations under the WTO. The WTO status of measures imposed not on products directly but on the methods by which they were produced, which is the case in carbon-related trade restrictions, is not clear. Whether such violations can be excused by exceptions for measures taken with the purpose to protect human life or health, or the environment, is an open question. There is also the question of whether solutions to the problem of the WTO's inconsistency with regard to trade-related measures in climate change policy can be found.

This paper explores the relationship between trade and climate change regimes, the potential areas of conflict, and what can be done to promote mutual gains. Apart from exploring the key issues and examining the conceptual underpinning of the two regimes, revealing important symmetries as well as some divergence, the paper is aimed at finding a more universal and long lasting solution to the WTO's inconsistency of carbon-related to GHG emissions, both within and outside the WTO.

³ The Montreal Protocol, which entered into force in 1989, is an international treaty designed to protect the ozone layer by phasing out the production and consumption of a number of substances (ODCs) responsible for ozone depletion. It is believed to be the most successful international agreement ever concluded.

⁴ Barrett, Scott (2010), "*climate change and International Trade: lessons on their linkage from international environmental agreements*". Background paper written for the TAIT second conference "Climate change, Trade and Competitiveness: http://graduateinstitute.ch/ctei/home/events/TAIT_climate_conference/TAIT_Papers.html (last accessed on 17 May 2011).

⁵ Barrett, Scott (2010), p. 10 ff.

2. RESEARCH PROBLEM

The multilateral efforts to combat climate change, on the one hand, and expand international trade, on the other, are motivated by divergent goals. The UNFCCC and its Kyoto Protocol seek largely to stem the potentially negative effects of energy-intensive activity on the atmosphere; the WTO and its General Agreement on Tariffs and Trade (GATT) are based on the premise that it is the expansion, not contraction, of economic activity through trade that will benefit all concerned. The climate change regime endeavours to correct the effect of market failure and negative externalities on the environment through economic instruments. By contrast, a key motivation of the trade regime is to correct government failure, or the inefficiencies arising from protectionist trade policy.⁶ The climate change regime operates on the precautionary principle, deploying science to predict future climate fluctuations and policies to respond to these effects. With the exception of the Sanitary and Phytosanitary Measures Agreement (SPS) for agriculture, science does not play a central role in the trade regime.⁷

However, there are also similarities between the two regimes. Both anticipate long-term benefits in the face of short-term compliance costs. Importantly, both regimes are still evolving and are attentive to the differentiated interests and obligations of developed and developing countries.⁸ Given these similarities and differences, there is much room to discuss the potential for discord or synergy between the two regimes. In the recent past, such discussion has focused largely on the terms laid out in the Kyoto Protocol, particularly those regarding emissions trading and domestic policies that may violate the WTO principles of non-discrimination.⁹ In this paper I explore how implementation of certain clean energy policies called for in Article 2 of the Kyoto Protocol may come into conflict with the WTO, while others may in fact be WTO-compatible. I also review the propositions by which synergies between the trade and climate change regimes can be increased.

⁶ Charnovitz S. (2003), *Trade and climate: potential for conflicts and synergies*, Pew center on global climate, Washington DC.

⁷ Ibid.

⁸ Murase S. (2003), *WTO/GATT and MEAs: Kyoto Protocol and beyond: GETS/FTC/GISPRI Project*

⁹ See for instance Brack, Duckan, Michael Grubb, Craig Windram, (2000). *International trade and climate change policies*.

3. RATIONALE OF THE RESEARCH

The United Nations Conference on Environment and Development (UNCED)¹⁰ marked a progression towards the integration of the economic and environmental aspects of international law. Principle 4 of the Rio Declaration on Environment and Development¹¹ reflects this interdependence which was central to the preparations for the UNCED: “In order to achieve sustainable development, environmental protection [must] constitute an integral part of the development process and cannot be considered in isolation from it”. Agenda 21¹² recognized that the international economy should provide a “supportive international climate for achieving environmental and developmental goals”¹³.

The international legal issues relating to trade and climate change, and competition and the environment, have become controversial in recent years.¹⁴ The two principal concerns are the use of international trade measures in environmental treaties, and the circumstances in which one or more states may lawfully adopt “unilateral” or bilateral environmental protection measures with respect to obligations flowing from global and regional free trade agreements. Due to the interrelationship between trade and climate change, a strong commitment to enhancing climate change measures through cooperation from bilateral and regional perspectives, is a necessary obligation for developing economies, which could suffer from environmental depletion caused by regional partners, resulting in economic disputes or competition in environmentally sensitive products.

Proponents of increased dialogue between the trade and climate regimes have been confronted with the argument that the two regimes are too single-minded to have anything to deliberate about. It is hoped that this paper will demonstrate some fertile ground for collaborative efforts. Although such collaboration will hardly be a solution to all of the deficiencies of the WTO or the Kyoto Protocol, much good can arise from seeking to avoid and prevent trade-climate conflict, and building more environmental sensitivity into the multilateral trading system.

¹⁰ http://www.eoearth.org/article/United_Nations_Conference_on_Environment_and_Development_%28UNCED%29,_Rio_de_Janeiro,_Brazil [Accessed on 12 March 2011]

¹¹ *The Rio Declaration* of 1992 had on its objective the establishing a new global and equitable partnership through the creation of new levels of co-operation among States, key sectors of society and peoples.

¹² Agenda 21, the Rio Declaration on Environment and Development, and the Statement of principles for the Sustainable Management of Forests were adopted by more than 178 Governments at the United Nations Conference on Environment and Development (UNCED) held in *Rio de Janeiro*, Brazil, 3 to 14 June 1992.

¹³ *Agenda 21*, paragraph 2.3.

¹⁴ <http://ictsd.org/i/news/bioresreview/12099/> [accessed on 21 March 2011]

4. THEORETICAL ASSUMPTIONS

On the one hand, lowering trade barriers and opening markets boost economic growth, which tends to increase GHG emissions. On the other hand, bigger markets spur technological innovation and diffusion, which can reduce the GHG intensity of economic growth. Moreover, as trade promotes higher national incomes, some countries will find themselves better able to afford emission abatement efforts.

Just as trade policy will have climate effects, climate change policy will have significant implications for trade relations and for the trade regime.¹⁵ By raising the cost of energy and energy-intensive goods, climate policies will affect economic competitiveness, both among countries undertaking climate efforts, due to different mitigation costs, as well as between those countries that undertake significant action and whose governments may seek to compensate for the costs of products. Either approach is likely to invite challenge, and national policies to reduce GHG emissions may also come into conflict with trade rules to the extent that they affect domestic and imported products differently. In an acknowledgement of these possibilities, Article 2.3 of the Kyoto Protocol states that the parties shall strive to implement policies and measures in such a way as to minimize adverse effects, including effects on international trade.¹⁶ Moreover, the Protocol authorizes the parties to take further action to promote implementation of this provision.¹⁷

The good news is that opportunities exist for making the trade and climate regimes more complementary and, potentially, synergistic. The two regimes could, at a minimum, work independently and together to anticipate and avoid conflict between their mandates. The climate regime, for instance, could facilitate a uniform approach to energy/GHG taxation, and, particularly, the application of taxes to imports and exports. Opportunities may also exist to promote climate objectives actively through the WTO, for instance, by launching negotiations to phase out fossil fuel subsidies. Yet at this time, there may be some trepidation within both trade and climate circles about engaging directly with each another.

¹⁵ Gibbs, Murray (2003). *Energy services, Energy Policies and the Doha Agenda*, in United Nations Conference on Trade and Development, *Energy and Environmental Services: Negotiating objectives and development priorities*, UN Conference on Trade and Employment, UNCTAD/DITC/TNCD/2003/3: 3. pp. 16-17

¹⁶ Cameron, James and Zen Makuch (1994). Implementation of the United Nations Framework Convention on Climate Change: international trade law implications: 116. In : *trade and environment: the search for balance*, James Cameron, Paul Demaret and Damien Geradin (Eds.), May

¹⁷ Kyoto Protocol, Article 3.14

5. RESEARCH HYPOTHESIS

The current international climate change regime does not explicitly provide for the use of trade-related measures. Nevertheless, article 3.5 of the UNFCCC, using the language of Article XX of the GATT, urges 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”. The inclusion of this language in the UNFCCC suggests that the use of trade measures for climate change policy objectives is not excluded. It is possible that a post-Kyoto international climate change agreement will contain trade-related provisions. What would be the relationship between a trade obligation under the WTO and a trade obligation under an international climate change regime in this case?

Therefore, if trade measures are not authorized by a post-Kyoto climate change agreement, the safest way is to avoid using them. If used, unauthorised trade measures should either be consistent with WTO rules, or they should be designed in a manner which allows their justification under the general exceptions of GATT Article XX.¹⁸

If trade measures, which conflict with the WTO, are authorized by a new climate change agreement, then, to avoid collision with the multilateral trading regime, WTO members will have to waive trade measures adopted under a climate change agreement from WTO obligations.

Despite the fact that clarification of the relationship between the WTO and MEAs has been assigned by the Doha Ministerial Declaration,¹⁹ the problem still remains unsettled, as the Doha Round is not concluded.²⁰ Consequently, at present, the relationship between the trade and climate change regimes is characterised by mutual avoidance. Climate change negotiators usually prefer to abstain from discussing of climate issues, finding the UNFCCC forum a more appropriate place for such discussions.²¹

¹⁸ Tarasofsky, Richard G. (2008), *Heating up international trade law: challenges and opportunities posed by efforts to combat climate change*, carbon and climate law Review, 1, pp. 7-17

¹⁹ *The Doha Ministerial Declaration* is one of two Declarations adopted at the WTO Fourth Ministerial Conference in Doha, on November 2001, which folded the ongoing negotiations on trade liberalization in agriculture and services into the Doha Development Round.

²⁰ Two other environment related tasks, listed in the Doha Development Agenda, are the working-out of procedures for regular information exchange between MEA secretariats and relevant WTO committees, and the reduction or elimination of tariff and non-tariff barriers to environmental goods and services. See *para. 31 of the Doha Ministerial Declaration*

²¹ Weischer, Lutz, Simmons, Benjamin, Van Asselt, Harro, and Zelli, Fariborz (2009), *Introduction-Climate and Trade Policies in a Post-2012 World* in climate and trade policies in a post-2012 world, UNEP, 2009

The mutual avoidance between the international trade and climate change regimes on the issue of trade-related measures does not guarantee the avoidance of the conflict in the future, which can substantially undermine the effectiveness of both regimes. Therefore, countries should clarify the relationship between trade-related provisions of an international climate change agreement and provisions of the WTO,²² and negotiate an effective solution to the problem of inconsistency of climate policy-related trade measures with WTO law.

This paper aims to identify potential legal conflicts between WTO rules and national laws and policies to meet targets. Although no trade disputes have yet occurred, the onset of such conflicts is only a matter of time, especially when WTO rules remain unclear. The most contentious issue will probably be the applicability of process-based energy taxes on imported products. Whether such law measures will be able to pass WTO muster will depend on how carefully they are written to avoid arbitrary discrimination, and whether a future climate change agreement incorporates such measures.

6. SCOPE OF THE RESEARCH

The relationship between trade and climate change covers a very broad areas and the research does not seek to deal extensively with all the issues due to the limited scope of a research paper. This paper will thus be limited to the interaction between trade and climate change, the potential areas of conflict, and what can be done to promote mutual gains. Further attention will be given to domestic climate change law and policy options that are compatible with WTO rules, and which are available to states.

7. RESEARCH OBJECTIVES

Generally, the study seeks to explore the interplay between the trade and climate change regimes. The specific objectives are as follows:

1. Examine the nexus between trade and climate change.

²² Clarification of the relationship will enhance mutual supportiveness of the trade and climate change policies. As it was pointed out by Cottier and Oesch (2005), to achieve the respective regulations should take into consideration the objectives, interests and constraints of the others. See Cottier and Oesch (2005), p. 517

2. Analyse the potential areas of conflict between a climate change regime and trade liberalisation under the WTO.
3. Explore the possibility of promoting the synergies between the two regimes, and look at the ways by which a co-operation between the two regimes could be promoted.
4. Provide suggestions for addressing the potential conflict to the Committee on Trade and Environment (CTE) whose mandate, it is to make recommendations on whether to modify WTO provisions in order to ensure that trade relations contribute to the objectives of sustainable development.²³

8. RESEARCH METHODS

The methodology for this research paper will consist of library research and document analysis, focusing on books, journals, case law, reports from the WTO on trade and environment matters, the UNFCCC, and different non-governmental organisations. The literature review will also include relevant legislation on trade and the environment, as well as official publications from the WTO Ministerial Department on Trade and Environment. These sources are relevant as they serve to identify the nature and scope of trade laws in relation to climate change at both national and international level, and which determine the intention of the legislature in respect of trade and the environment. The sources also offer an objective examination of the implementation and enforcement of the conventions or treaties on trade and the environment in different jurisdictions, and will therefore help to critically assess the policy and legislation that protect trade and the environment. The data for this study will therefore be obtained through an analysis of the relevant literature instead of field work.

9. SIGNIFICANCE OF THE STUDY

Interaction between trade and climate change should promote greater understanding between policy-makers and enable them to examine command and control strategies, energy

²³ Shaw and Schwartz, (2002) "Trade and environment in the WTO State of play" *Journal of the World Trade*, Volume 36. Kluwer Law International: 129-154

efficiency opportunities, taxes, emissions trading, subsidy reform, and inducements for technological progress.

Trade intersects with climate change in a multitude of ways. This is due in part to the innumerable implications that climate change may have both in terms of its potential impacts and in terms of the profound regulatory and economic changes which will be required to mitigate, and adapt to, these impacts.

The findings of the study could act as a guide to climate change laws, and to administrators, policy-makers and other related stakeholders, by enabling them to know the scope of climate change in their respective countries. In addition, the study will add to the knowledge of students in related subjects or fields, and may provide a stimulus for research on similar or related topics.

10. OUTLINE OF CHAPTERS

This research paper is divided into five chapters. The first chapter is an introduction to the entire study. It includes an introduction, background to the paper, the research problem, the research question, the hypothesis, the scope of the research, a theoretical assumption, the research methodology, the rationale, the significance of the study, and a chapter outline. Chapter two analyses the interaction between the trade and climate change regimes. It focuses on the relationship between the WTO agreements and the UNFCCC/Kyoto Protocol, the fundamental difference between the two regimes, the potential areas of conflict between the two regimes, and the possible joint solutions within the WTO and/or UNFCCC. The third chapter discusses the relevant provisions of the WTO.

The fourth chapter discusses domestic law and policies options that may comply with WTO law, which are available to states. This chapter considers whether domestic climate change law and policy options (inter alia, energy/GHG taxes, product regulations and standards, subsidies, and domestic emissions trading) are compatible with WTO rules.

Chapter five contains recommendations which the writer believes will promote greater synergies between the trade and climate change regimes. Finally, a conclusion will be drawn from the discussions in the paper.

CHAPTER II

INTERACTION BETWEEN THE TRADE AND CLIMATE CHANGE REGIMES

2.1. Introduction

The interaction between trade and climate change regimes contains tensions and even conflicts. A conflict originates from the nature of the objectives of the two regimes.²⁴ The climate change law and policy focuses on protection (it protects climate system from negative anthropogenic impacts); whereas the trade law and policy promotes liberalization (it seeks to provide free access of goods and services to a global market). As a consequence of the discrepancies in the objectives, proponents of free trade worry that the protection of climate system will be used as an excuse for protection of domestic industries; whereas environmentalists are afraid that the theory of free trade will be used to maximize profit totally neglecting environmental needs.²⁵

Moreover, the difference between the trade and climate change regimes is that climate change mitigation is a global public good, whereas trade is a mutual activity.²⁶ As a public good, climate change mitigation is characterized by a free riding and prisoner's dilemma problems.²⁷ Hence, dealing with the problem of climate change requires an intervention of the government to correct the market failure to internalize the costs of pollution, whereas liberalization of trade implies restraining government interventions to minimize market distortions of state regulations.²⁸

However, there are not only discrepancies but also similarities between the trade and climate change regimes. Their purpose is the same: both of them seek to promote sustainable development and increase the wellbeing of people. Good climate conditions are essential for life and health of people, while trade increase their wealth.

²⁴ Hufbauer, Gary Clyde, and Kim, Jisun (2009), "The World Trade Organisation and Climate Change: challenges and options", *Working Paper Series*, Peterson Institute for International Economics, September 2009, available at <http://www.iie.com/publications/wp/wp09.pdf>

²⁵ Frankel, Jeffrey (2005), "Climate and Trade: links between the Kyoto Protocol and WTO", *Environment*, 47 (7): 8-19, available at <http://www.hks.harvard.edu/fs/jfrankel/KyotoGEnvir05j-pub.pdf>

²⁶ Barrett, Scott (2010), "climate change and international trade: lessons on their linkage from international environmental agreements". Background paper written for the TAIT second conference climate change, trade and competitiveness: issues for the WTO, Geneva, 16-18 June 2010, available at http://graduateinstitute.ch/ctei/home/events/TAIT_Papers.html

²⁷ Barrett, Scott (2010), pp 1-2

²⁸ Hufbauer, Gary Clyde, and Kim, Jisun (2009), p. 4

From a legal point of view, there is no hierarchy between the trade and climate change regimes. Both sets of rules have equal status under international law, notwithstanding they were adopted in different fora.²⁹

2.2. Relationship between the WTO Agreements and the UNFCCC/Kyoto Protocol

The potential of the conflict between the trade and climate change regimes is difficult to estimate, to a large extent because of the indefinite relationship between the rights and obligations of countries under the WTO agreements and their rights and obligations under the UNFCCC or any future international climate agreement. There is a debate about the relationship between WTO rules and trade-related provisions of multilateral environmental agreements (MEAs), or “specific trade obligations” (STOs), as they are usually called in MEAs.³⁰

Specific trade obligations in MEAs tend to conflict with WTO rules. The most common violations of WTO rules by MEAs include:³¹

- A violation of the most-favored nation (MFN) principle (GATT Article I). For instance, the Montreal Protocol allows trade in ozone depleting substances (ODSs) with parties to the protocol and prohibits (through import and export bans) with non-parties;
- A violation of the national treatment principle (GATT Article III). MEAs often differentiate between products based on the way they are produced (e.g. using or not using ODSs under the Montreal Protocol). Differential treatment of imported and like domestic products based on non-product-related process and production methods (PPMs) can hardly pass the likeness and non-discrimination tests under Article III;
- A violation of prohibition of quantitative restrictions (GATT Article XI). For instance, import and export bans under the Montreal Protocol might qualify as prohibited import/export quantitative restrictions.

²⁹ WTO (2004), submission by the EC to the CTE, “the relationship between WTO Rules and MEAs in the context of the Global Governance System”, 24 March 2004, TN/TE/W/39.

³⁰ WTO (1996), Report of the WTO Committee on Trade and Environment to the WTO Ministerial Conference in Singapore, 8 November 1996, PRESS/TE 014.

³¹ Deal, Timothy E. (2008), “WTO Rules and Procedures and their Implication for the Kyoto Protocol”. Discussion Paper, USCIB, January 2008, available at http://www.uscib.org/docs/wto_and_kyoto_2008.pdf

The question is how a conflict between obligations of parties under MEAs and their obligations under the WTO Agreement should be settled.

The current international climate change regime does not explicitly provide for the use of trade-related law measures. Nevertheless, article 3.5 of the UNFCCC, using the language of article XX of the General Agreement on Tariffs and Trade (GATT), urges 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”. The inclusion of this language in the UNFCCC suggests that the use of trade law measures for climate change law and policy objectives is not excluded. It is possible that a post-Kyoto international climate agreement will contain trade-related provisions. What would be the relationship between trade obligations under the WTO and trade obligations under an international climate agreement in this case?

Even if no trade-related provisions are included in a post-Kyoto agreement, the question is whether trade law and measures that are not specifically authorized by MEAs can still be used by parties to MEAs to achieve its objectives. Switzerland proposed an interpretation of specific trade obligations, which could open the door to the use of trade-related law and measures in support of implementation of MEAs, even if such law and measures are not explicitly authorized by MEAs.³²

Therefore, if trade law and measures are not authorized by a post-Kyoto climate change agreement, the safest way is to avoid using them. If used, unauthorized trade law and measures should either be consistent with WTO rules, or they should be designed in a manner which allows their justification under general exceptions of GATT article XX.³³

If trade law and measures, which conflict with WTO law are authorized by a new climate change agreement, to avoid collision with the multilateral trading regime WTO members will have to waive trade law and measures taken under a climate agreement from WTO obligations. The problem would still remain with the WTO members that are not parties to a

³² WTO (2003), submission by Switzerland to the CTE Special Session, “The relationship between specific trade obligations set out in MEAs and WTO rules: Paragraph 31 (i)”, 10 February 2003, TN/TE/W/21.

³³ Deal, Timothy E. (2008), citing Sampson (1998), on p. 6. On the conditions for justification under article XX

climate agreement.³⁴ What to do if a WTO member is not party to the international climate agreement?

Article 31:3 (c) of the Vienna Convention of the law of Treaties (VCLT) says that along with the context of the relevant provisions of a treaty, “any relevant rules of international law applicable in the relations between the parties” should be taken into account. As interpreted by the panel in the EC-Biotech case, “the parties” in article 31:3 (c) of the VCLT are all the parties to a treaty being interpreted (in casu the WTO agreement).³⁵ Therefore, the applicability of provisions of an international climate agreement to a WTO agreement dispute might require not only that all the parties to the dispute are at the same time the parties to a climate agreement, but also that all WTO members are at the same time the parties to a climate agreement. The panel left this question open.³⁶ Such inference is also supported by article 34 of the VCLT, which stipulates that it is not possible to require from a third state an observation of rules of a treaty without its consent. Hence, violations of WTO obligations by trade law and measures taken under a climate agreement can easily be challenged by WTO members not party to that climate agreement.

Despite the fact that clarification of the relationship between the WTO and MEAs has been assigned by the Doha Ministerial Declaration,³⁷ the problem still remains unsettled, as the Doha Round is not concluded.³⁸ Consequently, at present, the relationship between the trade and climate change law and policy measures and laws to the WTO, trade negotiators usually prefer to abstain from discussions of climate issues, finding the UNFCCC forum a more appropriate place for such discussions.³⁹

The mutual avoidance between the international trade and climate change regimes on the issue of trade-related law and measures does not guarantee the avoidance of the conflict in

³⁴ Deal (2008), p. 12. The current Doha Round negotiations with a view to enhancing the mutual supportiveness of trade and environment are limited in scope to the applicability of “such existing WTO rules as among parties to the MEA in question” (*Doha Declaration, para 31*).

³⁵ EC-Approval and Marketing of Biotech Products, *panel report, para. 7.68*.

³⁶ EC-Approval and Marketing of Biotech Products, *panel report, para. 7.72*.

³⁷ The Doha Ministerial Declaration is one of the two declarations, adopted at the WTO Fourth Ministerial Conference in Doha, on 14.11.2001, which folded the ongoing negotiations on trade liberalization in agriculture and services into the Doha Development round.

³⁸ Two other environment-related tasks, listed in the Doha Development Agenda, are the working-out of procedures for regular information exchange between MEA Secretariats and relevant WTO committees, and reduction or elimination of tariff and non-tariff barriers to environmental goods and services. See *para. 31 of the Doha Ministerial Declaration*.

³⁹ Weischer, Simmons, Van Asselt and Zelli (2009), “Introduction – Climate and Trade Policies in a Post-2012 World”, in *climate and Trade Policies in a Post-2012 World*, UNEP, 2009.

the future, which can substantially undermine the effectiveness of both regimes. Therefore, countries should clarify the relationship between trade-related provisions of an international climate agreement and provisions of the WTO,⁴⁰ and negotiate an effective solution to the problem of inconsistency of climate policy-related trade law and measures with WTO law.

2.3. Fundamental difference between the two regimes

Although the trade and climate change regimes have different aims and purposes, they do in fact enjoy many common features. Both regimes aim to promote greater economic efficiency in order to enhance public welfare. Both regimes recognize linkages between the economy and the environment.⁴¹ Both look to the future and advocate actions that, while bringing on short-term adjustment costs, anticipate long-run benefits. Both regimes are worried about free riders and devote considerable attention to securing compliance. Both regimes are deferential to the violations of developing countries, and follow principles of “special and differential treatment” or “common but differentiated responsibilities”. Lastly, both regimes are dynamic works-in-progress, continuing institutional improvements during successive negotiations⁴²

Despite certain common features and shared views on the importance of sustainable development, a fundamental difference exists between the UNFCCC and the WTO regimes. Charnovitz (2003)⁴³ has pointed out that climate change presents an extreme case of market failure to incorporate the damage done by GHG emissions into the prices of goods and services, and that a classic role for governments is to correct market failures. However, governments normally want great flexibility in the choice of national instruments to correct

⁴⁰ Cottier, Thomas and Matthias Oesch (2005), *International Trade Regulation: law and policy in the WTO, the European Union and Switzerland: cases, Materials and Comments*. Chapter X: Relationship between the WTO and other Areas of Public international Law. Staempfli Publishers Ltd., Berne.

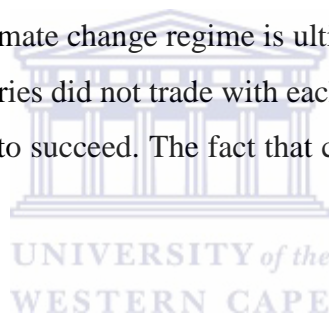
⁴¹ For example, the UNFCCC states that “the Parties should cooperate to promote a supportive and open international economic system that would lead to sustainable economic growth in all Parties, particularly developing country parties, thus enabling them better to address the problems of climate change” (art. 3.5). this is mirrored in the Preamble of the WTO Agreement which recognizes that “relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living ... 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 and to enhance the means for doing so ...”

⁴² Aldy, Joseph E., Peter R. Orszag, and Joseph E. Stiglitz (2001). Climate change: an agenda for global collective action, Paper Prepared for the Conference on “The Timing of climate change policies”, Pew Center on Global Climate Change, October.

⁴³ Charnovitz S. (2003). Trade and Climate: Potential for Conflict and Synergies, Pew Center on Global Climate Change, Washington DC.

market failure, because they need to balance the economic characteristics of alternative measures against their political acceptability. By contrast, the trade rules embodied in the GATT and the WTO presuppose a world of market economic and attempt to discipline government failures that lead to economic distortions with the flavor of mercantilism and protectionist. The climate change regime operates on the precautionary principle, deploying science to predict future climate fluctuations and policies to respond to these effects. Another difference between the two regimes is cultural. In the climate change regime, science plays a central role in measuring the problem, and in evaluating law and policy responses. In the trading system, science plays no role in rulemaking.⁴⁴

Because of their distinctive motivations, successful outcomes in the two regimes are defined differently. Although the trading prefers to move ahead with joint cooperation, the reality is that trade liberalization is often in each country's own interest, and so countries can move at different speeds. By contrast in the climate change regime, a high degree of inter-governmental cooperation is necessary if GHG emissions reduction is to be obtained. As a result, non-participation in the climate change regime is ultimately a more serious matter than in the trade regime. Even if countries did not trade with each other, the climate change regime would need cooperation in order to succeed. The fact that countries do trade brings the WTO into the picture.



2.4 Possible joint solutions within the WTO and UNFCCC

Although justification of a border adjustment measure under article XX is not entirely excluded, it will be difficult to design and implement a carbon related border adjustment measure in a way consistent with the purpose, scope and requirements of article XX, especially of the chapeau. Furthermore, justification of law and measure under article XX can be made each time only through litigation between the parties to a dispute in the WTO. This implies that the problem of violation of WTO rules will have to be resolved each time anew. Therefore, there seems to be a need for long-lasting institutional solutions to the problem of WTO inconsistency of carbon-related border adjustment measures.

⁴⁴ Science does play a role in some WTO dispute settlement. The WTO Agreement on the Application of Sanitary and Phytosanitary Measures, (art. 2.2), states that measures should be based on scientific principles, and not maintained without sufficient scientific evidence (subject to an exception). In dispute where the scientific validity of a trade barrier is in question, WTO panels have sought advice from scientists. In general, however, the WTO does not draw upon scientists in WTO subsidiary bodies or in negotiations.

Proposals have been made to initiate negotiations among the WTO members to reach a multilateral understanding or even an agreement on border adjustment measures on carbon and energy taxes and permissibility of application of processes and production methods (PPMs)-related measures for environmental and other legitimate purposes.⁴⁵ An alternative approach would be to adopt a protocol or resolution on trade-related climate change law and policy measures among the parties to the UNFCCC.⁴⁶ There is also the third way: to establish a joint WTO-UNFCCC Working Group on climate-related border adjustment measures.⁴⁷ Whatever track is chosen, it seems unfeasible today to create one global super-regulatory forum for gradual coordination and harmonization of trade-related instruments of climate change law and policy.⁴⁸

2.4.1 Solutions within the WTO

The uncertainty about the status and legality of climate change law and policy trade-related measures under WTO law can be explained to a great extent by the lack of adjudication on these matters.

So far, there have been no disputes between WTO members resulting from conflict between the WTO and the UNFCCC/Kyoto Protocol provisions. A dispute between the WTO members on trade-related climate change law and policy measures, including carbon-related border adjustments, could help decide on their permissibility. The panel and Appellate Body

⁴⁵ Biermann, Bohm, Brohm, Droge and Trabold (2003), *"The polluter pays principle under WTO law: the case of national energy policy instruments"*. Research Report, Environmental Research of the Federal Ministry of the Environment, Nature Conservation and Nuclear Safety, available at <http://www.umweltdaten.de/publikationen/pdf-l/2549.pdf>

⁴⁶ Hoerner and Muller (1996), "Carbon taxes for climate protection in a competitive world" – A Paper prepared for the Swiss federal office for foreign economic affairs. Environmental tax program of the center for global change. University of Maryland College Park, June 1996. Available at http://www.rprogress.org/publications/1996/swiss_1996.pdf

⁴⁷ Abbas, Mehdi (2008), "Trade policy and Climate Change: Options for a European Border Adjustment Measure". Working Paper, LEPII, Grenoble University, September 2008, available at www.fondapol.org/home/research/all-publications/publication/titre/trade-policy-and-climate-change-options-for-a-e-european-border-adjustement-measure.html

⁴⁸ Van Calster, Geert (2008), "Against harmonization –Regulatory Competition in Climate Change Law", *Carbon and Climate Law Review*, 1, pp. 89-94.

rulings from a series of WTO disputes could later from a set of rules on the use of trade instruments for climate change law and policy purposes.⁴⁹

The possible outcome of such litigation would be difficult to predict. On the one hand, it is unlikely that the WTO adjudicative bodies would authorize trade-restrictive law and measures which are not even authorized by the relevant MEAs, i.e. the UNFCCC/Kyoto Protocol. It should be remembered that, in most of the environmental disputes in the WTO⁵⁰, environmental law and measures have been found incompatible with WTO law. This might suggest that if a conflict arose over trade-related law and measures of MEAs, it would be ruled in favor of WTO law.⁵¹ On the other hand, the public awareness of the importance of climate change mitigation is so strong that it might influence a WTO panel's decision to accept such law and measures. Moreover, as noticed by McRae⁵², the Appellate Body's decision in Japan-Alcoholic Beverages II to interpret likeness on a case-by-case basis.⁵³

The advantage of the solution through WTO adjudication is that parties to a dispute would not lose anything from the outcome of the litigation, not even a defendant (i.e. a country which imposed a measure such as energy/GHG taxes, product regulations and standards, subsidies, and domestic emissions). Even if a measure were to be found to violate WTO law, there would be no sanctions imposed on a country for its past action and the country could thus change its legislation upon an eventual decision of a panel or the Appellate Body or offer a compensation for its refusal to comply with the decision under article 22 of the Dispute Settlement Understanding.⁵⁴

⁴⁹ Hufbauer and Kim (2009), "*The world trade organization and climate change: challenges and options*", Working Paper Series, Peterson Institute for International Economics, September 2009, available at <http://www.iie.com/publications/wp/wp09-9.pdf>

⁵⁰ With US-Shrimp – Article 21.5 as a remarkable exception

⁵¹ Brack, Duncan (2000), "Multilateral Environmental Agreements: An overview", in Halina Ward and Duncan Brack (eds.), *Trade, Investment and the Environment*. The Royal Institute of International Affairs/Earthscan Publications Ltd., London, 2000.

⁵² McRae, Donald M. (200), noticed that the Appellate Body's decision in Japan-Alcoholic Beverages II to interpret likeness on a case-by-case basis and its comparison of likeness with an accordion the width of which is determined inter alia by the context and the circumstances that prevail in any given case raises the question whether climate change mitigation would not be found a special case allowing a different meaning to be given to the word "like". See McRae (2000) in "GATT Article XX and the WTO Appellate Body", in Marco Bronckers and Reinhard Quick (eds.) *New Directions in International Economic Law: Essays in Honour of John H. Jackson*, Kluwer Law International, p. 223

⁵³ Japan-Alcoholic Beverages II, AB report, at 20-22

⁵⁴ Pauwelyn, Joost (2009), "Testimony before the Subcommittee on trade of the House Committee on ways and means, March 24, 2009, available at <http://www.docstoc.com/docs/9842017/Statement-of-Joost-Pauwelyn>.

2.4.2 Solutions within the UNFCCC

The UNFCCC can also be chosen as forum for discussing trade-related climate change law and policy measures.

It has been the opinion of the WTO Committee on Trade and environment since 1996 that all disputes over trade-related law and measures taken under MEAs should possibly be resolved in the framework of the MEA.⁵⁵ More recently, in the context of climate change, Pascal Lamy, Director-General of the WTO, has expressed the view that the WTO is already overloaded with the tasks under the Doha Development Agenda and to take now on extra negotiations on permissibility of trade-related climate change law and policy measures would lead to frustration. Therefore, these issues should be addressed by a post-Kyoto agreement between the UNFCCC members.⁵⁶

Hoerner and Muller⁵⁷ also find the UNFCCC a more appropriate forum to resolve conflict which may occur between trade and climate change law and policies than the WTO. They point to the little space given in the WTO agreements for environmental concerns. They propose to adopt a resolution by the UNFCCC parties that would override any conflicting provisions of the GATT and other WTO agreements concerning the application of climate change law and policy trade-related measures, in particular,

A resolution or a protocol on climate change law and policy border adjustment measures if adopted within the UNFCCC cannot be legally binding for the WTO Dispute Settlement Body, if a dispute is brought to the WTO. Nevertheless, Hoerner and Muller believe that a protocol on trade-related climate change law and policy measures if adopted by the UNFCCC parties could be legally binding for those WTO members that are also parties to the UNFCCC.⁵⁸

⁵⁵ WTO (1996), Report of the WTO Committee on Trade and Environment to the WTO Ministerial Conference in Singapore, 8 November 1996, PRESS/TE 014. Para. 178.

⁵⁶ U.S. Trade (2009:2).

⁵⁷ Hoerner and Muller (1996), "Carbon Taxes for Climate Protection in a Competitive World" – A Paper prepared for the Swiss Federal Office for Foreign economic affairs environmental Tax Program of the Center for Global Change. University of Maryland College Park, June 1996, available at http://www.rprogress.org/publications/1996/swiss_1996.pdf.

⁵⁸ Hoerner and Muller refer to article 30:3 of the Vienna Convention on the Law of Treaties, according to which, if two countries are parties to both conflicting international treaties (in this case, a would-be UNFCCC protocol and the WTO), a treaty more recently concluded prevails. In case if only a defending party happens to be a party to the protocol would have persuasive authority for a WTO panel. See Hoerner and Muller (1996), p. 39.

The ideal solution would be to have provisions on the use of border adjustment measures (BAMs) and other trade-related law and measures in a comprehensive international post-Kyoto climate agreement with its own dispute settlement system deciding on compliance with these rules and in parallel an agreement between WTO members on the relationship between the climate change and the WTO agreements.⁵⁹ In this case, all conflicts between the two bodies of international law would be precluded. However, given different interests of negotiating partners both in the UNFCCC and in the WTO this solution is hardly feasible.

The issue of carbon-related border adjustments is one of the most divisive in the UNFCCC negotiations on a future regime. Developing countries are vehement opponents of such measures as they fear that this would be just another excuse for protectionism and would hinder considerably their exports of carbon-intensive products. The culmination of discussions over the possibility to impose such law and measures on the part of developed countries was reached by the end of the preparations to the COP 15 in Copenhagen in late 2009 after which this issue was dropped from the final agenda of the conference as one which could devastate the negotiating process. The final document of the conference, the Copenhagen accord, contains references neither to border adjustments nor to any other trade-related measures which might be used in support of climate change law and policy. It is not certain whether the issue of border adjustments will be actively discussed in the next climate conference in Durban, South Africa at the end of 2011.

Barret (2010)⁶⁰, referring to the experience of the ozone layer protection system, emphasizes the importance of having an agreement on trade restrictions, if countries intend to use them for climate change law and policy objectives. Despite WTO inconsistency of trade law and measures foreseen by the Montreal Protocol (GATT article I and XI violations etc.), no country has challenged them in the WTO, as these law and measures were approved by all the parties voting on the protocol. The inclusion of trade law and measures in the protocol has resolved issues of their fairness and legitimacy.⁶¹

UNFCCC parties may also reach an agreement on the no use or restricted use of trade-related carbon measures, including border adjustment measures. Such an agreement may also be

⁵⁹ Holmes, Reilly and Rollo, border carbon adjustments and the potential for protectionism (forthcoming).

⁶⁰ Barret, Scott (2010), "climate Change and International Trade: Lessons on their linkage from international environmental agreements". Background paper written for the TAIT second conference "climate change, trade and competitiveness: issues for the WTO", Geneva, 16-18 June 2010, available at http://graduateinstitute.ch/ctei/home/events/TAIT_Climate_Conference/TAIT_Papers.html

⁶¹ Barret, Scott (2010), p. 24.

either as a provision included in a post-Kyoto climate agreement or as a separately signed agreement. India has already made an attempt to include such a provision. The paragraph which India proposed to include in the negotiating text of a post-Kyoto agreement for the Copenhagen conference in 2009 reads: “Developed country Parties shall not resort to any form of unilateral measures including countervailing border measures, against goods and services imported from developing countries on grounds of protection and stabilization of climate. Such unilateral measures would violate the principles and provisions of the Convention, including, in particular, those related to the principle of common but differentiated responsibilities (article 3, Paragraph 1); trade and climate change (article 3 paragraph 5); and the relationship between mitigation actions of developing countries and provision of financial resources and technology by developed country Parties (article 4, Paragraph 3 and 7).⁶²

2.5 Conclusion

At the outset, it would appear that multilateral efforts to combat climate change on the one hand and expand international trade on the other are motivated by divergent goals. The UNFCCC and the Kyoto Protocol seek largely to stem the potentially negative effects of energy-intensive activity on the atmosphere; the WTO/GATT are based on the premise that it is the expansion, not contraction, of economic activity through trade that will benefit all concerned. The climate change regime endeavours to correct market failure and negative externalities on the environment through economic instruments. By contrast, a key motivation of the trade regime is to correct government failure, or the inefficiencies arising from protectionist trade law and policy.⁶³ The climate change regime operates on the precautionary principle, deploying science to predict future climate fluctuations and law or policies to respond to these effects. With the exception of the SPS Measures Agreement for agriculture, science does not play a central role in the trade regime.⁶⁴

⁶² IIFT (2010), “Frequently asked questions: WTO compatibility of border trade measures for environmental protection”, Center for WTO studies, India Institute of Foreign Trade, available at http://wtocentre.iift.ac.in/FAQ/english/Environment_FAQ.pdf.

⁶³ Charnovitz S. (2003). The trade regime and the climate regime: institutional evolution and adaptation. Climate Change, Washington DC.

⁶⁴ Ibid.

However, there are also similarities between the two regimes. Both anticipate long-run benefits in the face of short-term compliance costs. Importantly, both regimes are still evolving and are attentive of the differentiated interests and obligations of developed and developing countries.⁶⁵ Given these similarities and differences, there is much room to discuss the potential for discord or synergy between the two regimes. In recent past, such discussion has focused largely on the terms laid out in the Kyoto Protocol, particularly regarding emissions trading and domestic law and policies that may violate WTO principles of non-discrimination.



⁶⁵ Murase S. (2003). WTO/GATT and MEAs: Kyoto Protocol and Beyond: GETS/FTC/GISPRI Project

CHAPTER III

RELEVANT PROVISIONS UNDER WTO LAW

1. Introduction

Several WTO disciplines may come into play if a carbon/energy tax or an emission trading scheme and /or their adjustments affect international trade.⁶⁶ The literature has been very prolific on the extent to which GATT and WTO rules would apply to border law measures based on the carbon content of products or based on the adoption of “comparable” climate change mitigation law and measures.⁶⁷

A number of factors has been triggered the discussion in the WTO, inter alia: (1) the recent design by governments of new law and policy mechanisms to mitigate climate change; (2) the concerns over competitiveness and carbon leakage and the related risk of protectionism; (3) the absence of universal commitment to reduce greenhouse gas emissions and the related temptation to use trade law measures to encourage reduction in emissions; and (4) some perceived legal uncertainties in GATT and WTO provisions about measures on production process, as they have not yet been clarified in the dispute settlement system of the WTO.

This chapter focuses on one of the key disciplines of the GATT and WTO agreements: the non-discrimination principle (i.e. national treatment principle and the most-favored nation clause). Moreover, if a trade-related climate change law measures is found to be consistent with one of the core provisions of the GATT (e.g. articles I, III or XI), justification could still be sought under article XX. This is the focus of the last point in this chapter.

Other measures and WTO agreements may be also relevant to climate change related law measures such as the prohibition of quantitative restrictions⁶⁸ and measures on technical barriers to trade. Also, the provisions of the agreement on subsidies and countervailing measures (ASCM) may be relevant to emission trading schemes, for instance if allowances are allocated free of charge. Some authors⁶⁹ are of the view that free allowances could

⁶⁶ Wersksman, J. (1999), “Greenhouse gas emissions trading and WTO”, *Review of European Community and International Environmental Law* 8:3, p. 257.

⁶⁷ Cosby, A. (2008), *Border carbon adjustment*, trade and climate change seminar, Copenhagen June 2008, IISD, German Marshall Fund of the United States, p. 8.

⁶⁸ Pursuant to GATT article XI, restrictions on the importation or sale of products from other WTO members are prohibited.

⁶⁹ Lodefalk, M. and Storey, M. (2005), “climate measures and WTO rules on subsidies”, *Journal of world trade* 39:1, pp. 41-44.

constitute actionable subsidies covered by the SCM agreement.⁷⁰ It should be noted however that if free allowances are found to be actionable subsidies covered by the SCM agreement, “adverse effects” would have to be demonstrated for action to be taken by another WTO member.

2. Non-discrimination principle

2.1. National treatment

The national treatment principle may be particularly relevant in case where a climate changes related regulation is applied differently to domestic and foreign producers. The national treatment principle is a key discipline of the WTO and GATT. In accordance with GATT article III, a member shall not discriminate between its own and like foreign products (giving them “national treatment”).

Article III.2 deals specifically with internal taxes or other internal charges. For a tax or charge on imports to fall under this provision, it needs to apply “directly or indirectly, to like domestic products”. The key question is whether a potential tax on CO₂ emissions released during the production process will be considered to be a tax applied indirectly to products. For taxes or charges on imports to be consistent with article III.2, they should not be applied “in excess” to taxes levied on like domestic products. Moreover, in accordance with GATT article III.2, second sentence, and the Ad Note, “directly competitive or substitutable” imported and domestic products shall incur similar taxes, and these shall not be applied so as to afford protection to domestic production.

GATT article III.4 addresses “laws, regulations and requirements affecting the internal sale, offering for sale, purchase, transportation, distribution or use” of products. As indicated by the Appellate Body in the US-FSC (article 21.5, EC) case, the word “affecting” in article III.4 can be interpreted as having a “broad scope of application”.⁷¹ Article III.4 provides that, in respect of all such regulations and requirements, imported products shall not be accorded treatment less favorable than that accorded to like domestic products. In the *Korea-various*

⁷⁰ Article 1.1 of the SCM agreement defines a subsidy as a “financial contribution” by a government or public body that confers a “benefit”. Article 1.2 of the SCM agreement provides that only “specific” subsidies fall within the scope of that agreement.

⁷¹ Appellate Body, US-FSC (article 21.5-EC), Para. 210

measures on the *Beef case*, the Appellate Body found that imported products are treated less favorably than like products if a measure modifies the conditions of competition in the relevant market to the detriment of imported products.⁷²

The national treatment principle is also found in several other WTO agreements, such as the Technical Barriers to Trade (TBT) agreement (articles 2, 5, Annex 3.D) and the Sanitary and Phytosanitary Measures Agreement (article 2). On the other hand, it should be noted that in the GATS, article XVII allows a WTO member to maintain discriminatory conditions on its national treatment obligations unless it commits otherwise.

2.2. Most-favored nation clause

According to the most-favored nation clause, a WTO member shall not discriminate between “like” products from different trading partners (giving them equally “most favored-nation” status). GATT article 1.1 provides that “any advantage, favor, privilege or immunity” granted by any member to any product originating in or destined for any other member shall be accorded immediately and unconditionally to the like product originating in or destined for the territories of all others members. As explicitly provided in article 1.1, the scope of application of this provision also extends to all matters referred to in paragraphs 2 and 4 of article III. The most-favored nation clause is also found in other WTO agreements, including article II of the GATS and article 2 of the TBT agreement.

2.2.1. Definition of like products

One of the key questions discussed in relation to the application of the non-discrimination principle as contained in GATT article I and III related to the “likeness” of domestic and imported products. This is an important question: when a domestic product and imported product are found to be “like”, their treatment must be consistent with the national treatment principle and the most-favored nation clause.

The question of the definition of “likeness” has been addressed by a number of dispute settlement cases. As rephrased⁷³ by the appellate Body in the *EC-Asbestos* case, the analysis

⁷² Appellate Body, *Korea-various measures on Beef*, para. 137

of the likeness of products is based on four categories of “characteristics” that the products involved might share:⁷⁴ “(1) the physical properties of the products; (2) the extent to which the products are capable of serving the same or similar end-uses; (3) the extent to which consumers perceive and treat the products as alternative means of performing particular functions in order to satisfy a particular want or demand; and (4) the international classification of the products for tariff purposes”.⁷⁵

The Appellate Body has made it clear that the concept of likeness is one that needs to be addressed on a case-by-case basis:⁷⁶ the four criteria are simply tools to assist in the task of sorting and examining the relevant evidence and not a closed list of criteria that determine the legal characterisation of products.⁷⁷

An important question in relation to the application of the four above-mentioned criteria to climate change law measures is whether products may be considered “unlike” because of differences in the way in which they have been produced, even though the production method used does not leave a trace in the final product, i.e. even if the physical characteristics of the final product remain identical.



3. GATT article XX exceptions

A number of authors have underlined the importance of the case law related to GATT article XX on general exceptions in the context of climate change related law measures.⁷⁸ If a particular law measures is inconsistent with one of the core provisions of the GATT (e.g. articles I, III or XI), it could still be justified under article XX. Article XX lays out a number of specific instances in which WTO members may be exempted from GATT rules. Two exceptions are of particular relevance to the protection of the environment: paragraphs (b)

⁷³ In the GATT context, the 1970 *Working Party on Border Tax Adjustments* suggested some criteria for determining whether products are “like”: “the product’s end-uses in a given market; consumers tastes and habits, which change from country; the product’s properties, nature and quality”, GATT Working Party (1970), para. 18.

⁷⁴ Appellate Body, *EC-Asbestos*, para. 101.

⁷⁵ Concerning the likeness analysis in relation to international taxes, the GATT Panel in the superfund case noted that the reason for imposing the tax, i.e. whether the tax was levied to encourage the rational use of environmental resources or for general revenue purposes, was irrelevant. See GATT Panel Report, *US-superfund*, paras. 5.2.3-5.2.4.

⁷⁶ See Appellate Body, *EC-Asbestos*, para. 102; Appellate Body, *Japan-Alcoholic Beverages II*, p. 21.

⁷⁷ Appellate Body, *EC-Asbestos*, para. 102.

⁷⁸ Werksman, J. (1999), “Greenhouse gas emissions trading and the WTO”, *Review of European Community and international Environmental law* 8:3, pp. 260-261.

and (g) of article XX. According to these two paragraphs, WTO members may adopt policy and law measures that are inconsistent with GATT disciplines, but necessary to protect human, animal or plant life or health (paragraph (b)), or relating to the conservation of exhaustible natural resources (paragraph (g)).

GATT article XX on general exceptions consists of two cumulative requirements. For a GATT-inconsistent environmental law measure to be justified under article XX, a member must perform a two-tier analysis proving: firstly, that its measure falls under at least one of the exceptions (e.g. paragraphs (b) and/or (g), two of the ten exception, under article XX); and, secondly, that the measure satisfies the requirements of the introductory paragraph (the “chapeau” of article XX), i.e. that it is not applied in a manner which would constitute “a means of arbitrary or unjustifiable discrimination between countries where or same conditions prevail”, and is not “a disguised restriction on international trade.”⁷⁹

3.1. Environmental law and policies covered by Article XX

WTO member’s autonomy to determine their own environmental objectives has been reaffirmed on a number of occasions (e.g. in *US-Gasoline*, *Brazil-Retreaded Tyres*). The Appellate Body also noted, in the *US-shrimp case*, that conditioning market access on whether exporting members comply with law and policy unilaterally prescribed by the importing member was a common aspect of measures falling within the scope of one the exceptions of article XX.⁸⁰ In past cases, a number of law and policies have been found to fall within the realm paragraphs (b) and (g) of article XX: (1) law and policies aimed at reducing the consumption of cigarettes,⁸¹ protecting dolphins,⁸² reducing risks to human health posed by asbestos,⁸³ reducing risks to human, animal and plant life and health arising from the accumulation of waste tyres⁸⁴ (under article XX (b)); and (2) law and policies aimed at the conservation of tuna,⁸⁵ salmon and herring,⁸⁶ dolphins,⁸⁷ turtles,⁸⁸ petroleum,⁸⁹ and clean air⁹⁰ (under article XX (g)).

⁷⁹ Appellate Body, *US-Gasoline*, p. 22.

⁸⁰ Appellate Body, *US-Shrimp*, para. 15.

⁸¹ GATT panel, *Thailand-cigarettes*.

⁸² Unadopted GATT panel, *US-Tuna (Mexico)*; Unadopted GATT panel, *US-Tuna (EEC)*.

⁸³ Appellate Body, *EC-Asbestos*.

⁸⁴ Appellate Body, *Brazil-Retreaded tyres*.

⁸⁵ GATT Panel, *US-Canadian Tuna*.

Although law and policies aimed at climate change mitigation have not been discussed in the dispute settlement system of the WTO, the example of the *US-Gasoline case* may be relevant. In this case, the panel had agreed that the law and policy reduce air pollution resulting from the consumption of gasoline was the law and policy concerning the protection of human, animal and plant life or health as mentioned in article XX (b).⁹¹ Moreover, the panel found that the law and policy to reduce the depletion of clean air was the law and policy to conserve a natural resource within the meaning of article XX (g).⁹² Against this background, some authors have argued that the law and policies aimed at reducing CO₂ emissions could fall under article XX (b), as they intend to protect human being from the negative consequences of climate change (such as flooding or sea-level rise), or under article XX (g), as they intend to conserve not only the planet's climate but also certain plant and animal species that may disappear because of global warming.⁹³

Also in the *US-Shrimp case*, the Appellate body accepted as law and policy covered by article XX (g) on that applied not only to turtles within the United States' waters but also to those living beyond its national boundaries. The Appellate Body found that there was a sufficient nexus, or connection, between the migratory and endangered marine populations involved and the United States for purposes of article XX (g).⁹⁴ This point is particularly important in the context of climate change mitigation law and policies. Some authors have indeed argued that this finding could be relevant to establishing a sufficient nexus between a member's domestic mitigation law and policy or a border measure and the intended objective of this law and policy, the protection of a global common asset, the atmosphere.⁹⁵

⁸⁶ GATT Panel, *Canada-Herring and Salmon*

⁸⁷ *US-Tuna (Mexico)* and *US-Tuna (EEC)*.

⁸⁸ Appellate body, *US-Shrimp* and appellate body, *US-Shrimp (article 21.5-Malaysia)*

⁸⁹ Unadopted GATT Panel, *US-Taxes on automobiles*.

⁹⁰ Appellate body, *US-Gasoline*.

⁹¹ Panel, *US-Gasoline*, para. 6.21

⁹² Panel, *US-Gasoline*, para. 6.37

⁹³ Meyer-Ohlendorf, N. and Gerstetter, C. (2009), "trade and climate change, triggers or barriers for climate friendly technology transfer and development?" Dialogue on globalization, occasional Paper 41, p. 36

⁹⁴ Appellate Body, *US-Shrimp*, para. 133

⁹⁵ Pauwelyn, J. (2007), *US Federal Climate Policy and Competitiveness concerns: the limits and options of international trade law*, Nicholas Institute for Environmental Policy solutions, Duke University, Working Paper, p. 35.

3.2. Degree of connection between the means and the environmental law and policy objectives

In order for a trade-related climate change law measure to be eligible for an exception under article XX, paragraphs (b) and (g), a connection needs to be established between its stated climate change law and policy goal and the measure at issue. The measure needs to be either: necessary for the protection of human, animal or plant life or health (paragraph (b) or relating to the conservation of exhaustible natural resources (paragraph (g)).

To determine whether a measure is “necessary” to protect human, animal or plant life or health under article XX (b), a process of weighing and balancing a series of factors has been used by the Appellate Body, including the contribution made by the environmental law measure to the policy objective, the importance of the common interests or values protected by the law measure and the impact of the law measure on international trade. If this analysis yields a preliminary conclusion that the law measure is necessary, this result must be confirmed by comparing the law measure with its possible alternatives, which may be less trade-restrictive while providing an equivalent contribution to the achievement of the objective pursued.⁹⁶

For instance, in the *Brazil-Retreaded Tyres case*, the Appellate Body found that the impact ban on retreaded tyres was “apt to produce a material contribution to the achievement of its objective”, (i.e. the reduction in waste tyres volumes).⁹⁷ The Appellate Body also found that the proposed alternatives, which were mostly remedial in nature (i.e. waste management and disposal, were not real alternatives to the import ban, which could prevent the accumulation of tyres.⁹⁸

In *EC-Asbestos*, the Appellate Body also found, as a result of a process of weighing and balancing a series of factors, that there was no reasonably available alternative to a trade prohibition. This was clearly designed to achieve the level of health protection chosen by France and the value pursued by the measure was found to be “both vital and important in the highest degree”.⁹⁹ The Appellate body made the point that the more vital or important the

⁹⁶ Appellate Body, *Brazil-Retreaded Tyres*, para. 178.

⁹⁷ *Ibid*, para. 155.

⁹⁸ *Ibid*, paras. 156-175.

⁹⁹ Appellate Body, *EC-Asbestos*, para. 172.

common interests or values pursued, the easier it was to accept as necessary law measures designed to achieve those ends.¹⁰⁰

For the law measure to be “relating to “ the conservation of national resources in line with article XX (g), a substantial relationship between the law measure and the conservation of exhaustible natural resources needs to be established. In the words of the Appellate Body, a member has to establish that the means (i.e. the chosen measure), are “reasonably related” to the ends (i.e. the stated law and policy goal of conservation of exhaustible natural resources).¹⁰¹ Moreover, in order to be justified under article XX (g), a law measure affecting imports must be applied “in conjunction with restrictions on domestic production or consumption”.¹⁰²

For instance, in the context of the *US-Gasoline case*, the United States has adopted a law measure relating the composition and emission effects on gasoline in order to reduce air pollution in the United States. The Appellate Body found that the chose law measure was “primarily aimed at” the law and policy goal of conservation of clean air in the United States and thus fell within the scope of paragraph (g) of article XX.¹⁰³ As far as the second requirement of paragraph (g) is concerned, the Appellate Body ruled that the law measure met the “even-handedness” requirement, as it affected both imported and domestic products.¹⁰⁴

In the *US-Shrimp case*, the Appellate Body considered that the general structure and design of the law measure in question were “fairly narrowly focused” and that it was not a blanket prohibition of the importation of shrimp imposed without regard to the consequences to sea turtles;¹⁰⁵ thus, the appellate Body concluded that the regulation in question was a law measure “relating to” the conservation of an exhaustible natural resource within the meaning of article XX (g).¹⁰⁶ The Appellate Body also found that the law measure in question had been made effective in conjunction with the restrictions on domestic harvesting of shrimp, as required by article XX (g).¹⁰⁷

¹⁰⁰ Ibid.

¹⁰¹ Appellate body, *US-Shrimp*, para. 141.

¹⁰² Appellate Body, *US-Gasoline*, pp. 20-21.

¹⁰³ Ibid, para. 18.

¹⁰⁴ Ibid, para. 19

¹⁰⁵ Appellate Body, *US-Shrimp*, para. 138

¹⁰⁶ Ibid, para, 142

¹⁰⁷ Ibid, para. 145

In the context of climate change, according both to article XX (b) and to article XX (g), a substantial link will need to be established between the trade law measure and the environmental objective. It should be noted that in *Brazil-Retreaded tyres*, the Appellate Body recognized that certain complex environmental problems may be tackled only with a comprehensive law measures. The Appellate body pointed out that results obtained from certain action, for instance, law measures adopted in order to address global warming and climate change, can only be evaluated with the benefit of time.¹⁰⁸

3.3. The importance of the manner in which trade-related environmental law measures are applied

The introductory clause of article XX emphasizes the manner in which the law measure in question is applied. Specifically, the application of the law measure must not constitute a “means of arbitrary or unjustifiable discrimination” or a “disguised restriction on international trade”.

The chapeau of article XX requires that the law measure does not constitute an abuse or misuse of the provisional justification made available under one of the paragraphs of article XX, that is to say, is applied in good faith.¹⁰⁹ In *Brazil-Retreaded Tyres*, the Appellate Body recalled that the chapeau serves to ensure that WTO members’ right to avail themselves of exceptions is exercised in good faith in order to protect legitimate interests, not as a means to circumvent one member’s obligations towards other WTO members.¹¹⁰ In other words, article XX embodies that recognition by WTO members of the need to maintain a balance between the right of a member to involve an exception, and the rights of the other members under the GATT.

WTO jurisprudence has highlighted some of the circumstances which may help to demonstrate that a law measure is applied in accordance with the chapeau of article XX. These include relevant coordination and cooperation activities undertaken by the defendant at the international level in trade and environmental area, the design of the law measure, its flexibility to take into account different situations in different countries, as well as an analysis of the rationale put forward to explain the existence of a discrimination (the rationale for the

¹⁰⁸ Appellate Body, *Brazil-Retreaded Tyres*, para. 151.

¹⁰⁹ Appellate body, *US-Shrimp*, para. 158

¹¹⁰ Appellate body, *Brazil-Retreaded Tyres*, para. 215

discrimination needs to have some connection to stated objective of the law measure at issue).

For instance, in the *US-Gasoline decision*, the Appellate body considered that the United States had not sufficiently explored the possibility of entering into cooperative arrangements with affected countries in order to mitigate the administrative problems raised by the United States in their justification of the discriminatory treatment.¹¹¹ Moreover, in the *US-Shrimp case*, the fact that the United States had “treated WTO members differently” by adopting a cooperative approach regarding the protection of sea turtles with some members but not with others also showed that the law measures was applied in a manner that discriminated among WTO members in an unjustifiable manner.¹¹²

At the compliance stage, in *US-Shrimp* (article 21.5), the appellate body found that, in view of the serious, good faith efforts made by the United States to negotiate an international agreement on the protection of sea turtles, including with the complainant, the law measure was now applied in a manner that no longer constituted a means of unjustifiable or arbitrary discrimination.¹¹³ The Appellate Body also acknowledged that, “as far as possible”, a multilateral approach is strongly preferred” over a unilateral approach.¹¹⁴ But, it added that, although the conclusion of multilateral agreements was preferable, it was not a prerequisite to benefit from the justifications in article XX to enforce national environmental law measures.¹¹⁵

Moreover, in the *US-Shrimp case*, the Appellate Body was of the view that rigidity and inflexibility in the application of the law measure (e.g. by overlooking the conditions in other countries) constituted unjustifiable discrimination.¹¹⁶ It was deemed not acceptable that a WTO member would require another member to adopt essentially the same regulatory programme, without taking into consideration those conditions in other members’ territories might be different, and that the law and policy solutions might be different, and that the law and policy solution might be ill-adapted to their particular conditions.¹¹⁷

¹¹¹ Appellate Body, *US-Gasoline*, p. 26

¹¹² Appellate Body, *US-Shrimp*, para. 166

¹¹³ Appellate Body, *US-Shrimp (article 21.5-Malaysia)*, para. 134

¹¹⁴ *Ibid*, para. 124

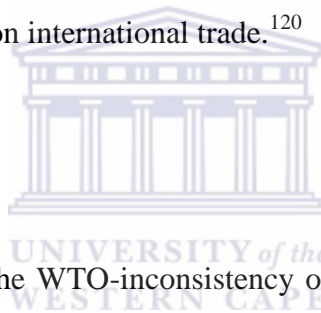
¹¹⁵ *Ibid*, para. 134

¹¹⁶ Appellate Body, *US-Shrimp*, paras. 167-164

¹¹⁷ *Ibid*, para. 164

In order to implement the panel and Appellate Body recommendations, the United States revised its law measure and conditioned market access on the adoption of a programme comparable in effectiveness to that of the United States. For the appellate Body, in *US-Shrimp* (article 21.5), this allowed for sufficient flexibility in the application of the law measures so as to avoid arbitrary or unjustifiable discrimination.¹¹⁸ The Appellate Body pointed out, however, that article XX does not require a WTO member to anticipate and provide explicitly for the specific conditions prevailing in every individual member.¹¹⁹

Finally, an environmental law measure may not constitute a “disguised restriction on international trade”, i.e. may not result in protectionism. In past cases, it was found that the protective application of a law measure could most often be descend from its “design, architecture and revealing structure”. For instance, in *US-Shrimp* (article 21.5), the fact that the revised law measure allowed exporting countries to apply programmes based on the mandatory use of turtle excluder devices (TEDs) and offered technical assistance to develop the use of TEDs in third countries, showed that the law measure was not applied so as to constitute a disguised restriction on international trade.¹²⁰



4 Conclusion

The straightforward solution to the WTO-inconsistency of trade-related climate change law and policy measures would be to change the relevant WTO provisions to accommodate climate change law and policy concerns.¹²¹ It would imply, inter alia, a permission of differentiation among products on the basis of PPMs for the purposes of GATT Articles I and III, acceptability of energy and carbon taxes for adjustment, supplementing GATT Article XX with a paragraph which would contain an exception particularly for climate change law and measures etc.

WTO members may adopt a decision on interpretation of WTO rules to accommodate climate change concerns. In 1998, the European Parliament passed a resolution urging WTO members to adopt a Statement of Understanding concerning the interpretation of a “like

¹¹⁸ Appellate Body, *US-Shrimp (article 21.5-Malaysia)*, para. 144

¹¹⁹ *Ibid*, para. 149

¹²⁰ Panel, *US-Shrimp (article 21.5-Malaysia)*, para. 5.142

¹²¹ Hufbauer and Kim (2009), p. 10. In 1992 Jackson proposed changes into GATT system to better accommodate environmental policy concerns. See Jackson (1992), p. 6

products” concept which would enable otherwise identical products to be differentiated based on PPMs for environmental purposes.¹²²

In any case, the procedure of changing rules of the WTO is very difficult. Pursuant to article X:2 of the Marrakesh Agreement Establishing the WTO (the WTO Agreement), changes into the vital provisions of WTO agreements, including the MFN principle of GATT Article I and tariff concessions of GATT Article II, can take effect only upon acceptance of all WTO members. Amendments into other provisions as well as decisions and understandings on interpretation of WTO provisions (article IX: 2 of the WTO Agreement) require two-thirds of WTO member votes. In the current situation of developing countries’ opposition to emission controls, including carbon-related border adjustments, to get such consensus would be practically impossible.¹²³



¹²² Bronckers, Marco and McNelis, Nathalie (2000), “Rethinking the “Like Product” Definition in GATT 1994: Anti-Dumping and Environmental Protection”, in Marco C.E.J. Bronckers *A cross-Section of WTO Law*, Cameron May, 2000, pp. 15-56

¹²³ Bacchus, James (2010), “Questions in search of Answers: Trade, Climate Change, and the Rule of Law”. Keynote Address to the conference on “Climate Change, Trade and Competitiveness: Issues for the WTO”. Geneva, 16 June 2010, available at <http://www.gtlaw.com/portalesource/bacchus1> (Last accessed on 17 July 2011)

CHAPTER IV

NATIONAL LAW AND POLICY OPTIONS AVAILABLE TO STATE

4.1 Introduction

This chapter considers which various domestic climate change law and policy options are possibly compatible with WTO rules. Four law and policy options are discussed: energy/GHG taxes, product regulations and standards, subsidies, and domestic emissions trading. Note that any of these might be perceived by someone as a “trade barrier”. But they are categorised as “domestic” law and policy options in this study because they are not premised on treating imports differently from domestic products.

For many laws and policies options, the most relevant GATT law constraints will be Article III, which bars a government from discriminating against “like” products from other countries, and Article XX, which allows General Exceptions for several purposes, including measures necessary to protect human, animal or plant life and health, and measures relating to the conservation of exhaustible natural resources. Article III imposes the obligation of “national treatment”, requiring imported goods to be treated no less favorably than “like” domestic goods. In a dispute, the two key questions will be: (1) whether the domestic product and the competing import are “like” and (2) whether the treatment of the import is less favorable.¹²⁴ A government law measure that violates Article III can be excused under Article XX when the law and policy fits within one of the General Exceptions, provided that the measure is not applied in an arbitrary or unjustifiable manner and is not a disguised restriction on international trade. In the first eight years of the WTO, Article XX has been interpreted more flexible than in previous GATT jurisprudence.¹²⁵

4.2 Energy/GHG Taxes

A tax may be an appropriate instrument to address climate change law measures because it can reduce demand for energy, promote more efficient technologies, and with GHG taxes,

¹²⁴ Regan, Donald H. (2002), Regulatory purpose and “like products” in Article III:4 of the GATT (with additional remarks on Article III:2), *Journal of the World Trade* 36: 443

¹²⁵ Wiers, Jochem (2002), Trade and Environment in the EC and the WTO. A legal analysis, Europe Law Publishing. pp. 361-64

lead to the adoption of cleaner energy. Because a tax conveys the same incentive to all emitters, those who can reduce emissions at low cost will do so.

WTO rules have many implications for how a government may employ domestic taxes. If a government refrained from rebating any tax on exports and refrained from applying any tax to imports, then no WTO legal problems would be encountered. But such tax restraint is unlikely. Governments will usually seek to apply domestic taxes symmetrically to imported products in order to prevent distortions and seek a level playing field.¹²⁶ Similarly, governments may want to unburden exports from taxes in order to prevent double taxation. Such governmental concerns about fairness can, in general, be carried out in conformity with WTO rules. Nevertheless, many potential points of tension exist. To explain the application of WTO rules to energy/GHG taxes, the study presents several hypothetical situations below.

4.2.1 Gasoline Tax

Gasoline tax starts with a tax on gasoline at the retail level. As long as the tax is imposed identically on gasoline produced from domestic and imported sources, it would be in accord with the “national treatment” requirement in GATT Article III that a tax on an imported product cannot be in excess of the tax on a like domestic product.

4.2.2 Automotive Fuel economy Tax

It considers a tax on automobiles based on the fuel economy of each model type. If such a tax is applied in an origin-neutral manner, it could be in accord with GATT article III. Yet complications can arise if it turns out that the brunt of the tax is borne by imported vehicles. The exporting country can argue that the tax amounts to de facto discrimination because the tax accords protection to domestic production. Should a dispute panel agree? The taxing government would have an opportunity to defend the difference by invoking the exceptions in Article XX. The success of such a defense would depend on the precise facts of the case including how the tax is being administratively applied. In the 1994 *Automobile Taxes case*, a

¹²⁶ Westin, Richard A. (1997), *Environmental tax initiatives and multilateral trade agreements. Dangerous collisions*, Kluwer Law International.

GATT panel ruled that high-fuel efficient cars are not “like” gas-guzzling cars, but whether the contemporary WTO jurisprudence would lead to the same result is unclear.

4.2.3 Fuel Carbon Tax

Another hypothesis is a tax based on the carbon content of fuel. In a recent submission to the WTO Committee on Trade and Environment,¹²⁷ Saudi Arabia advocated basing fossil fuel taxes on carbon content in order to reduce energy market distortions.¹²⁸ A key legal judgment would be whether differential taxes on fuel (e.g. natural gas versus coal) lead to higher taxes being imposed on imports, in violation of GATT article III. If so, then the government applying the tax would seek to offer a defense under GATT Article XX. Some analysts doubt that such a defense would be successful.¹²⁹

4.2.4 Process-Based Electricity Tax

Greater legal complexity would ensue with a tax on electricity based on the amount of GHG emissions during the generation of the power. For example, electricity produced from hydropower could be taxed lower than electricity produced from oil. The discussion here assumes that electricity is a good rather than a service.¹³⁰

A 1998 case arising under European Union law is instructive because of its similarity to WTO law. In the *Outokumpu Oy* proceeding, Finland taxed electricity using different rates depending on how it was generated.¹³¹ Because of the practical difficulty of determining how imported energy was produced, Finland taxed imports at a flat rate set to approximate an

¹²⁷ The Committee on Trade and Environment was established at the outset of the WTO to consider several issues related to the trade/environment linkage. The Committee is composed of all WTO member governments, and does not have a policymaking role.

¹²⁸ Saudi Arabia (2002), Committee on Trade and Environment Special Session, Energy Taxation, Subsidies and Incentives in OECD Countries and their Economic and Trade Implications on Developing Countries, in particular developing oil producing and exporting countries, TN/TE/W/9 (September 23) paras. 17, 58-59.

¹²⁹ Zarrilli, Simonetta (2003), Domestic Taxation of Energy Products and Multilateral Trade Rules: is this a case of unlawful discrimination, *Journal of World Trade* 37: 359.

¹³⁰ Whether electricity is a good or a service in the WTO is unclear. Little elucidation can be found in the GATT which explains that the term “goods” is limited to products as understood in commercial practice and does not include services; see GATT Ad Article XVII, para. 2. The GATT’s negotiating history includes a statement that it was generally agreed that electricity as a good. See Pierros and Nuesch (2000), Trade in Electricity: spot on, *Journal of World Trade* 34 (4): 95.

¹³¹ *Outokumpu Oy*, C-213/96 (Apr. 2, 1998).

average of the domestic rates.¹³² The importer complained that this flat rate was a violation of the European Communities Treaty, which forbids direct and indirect discrimination against imported products. The Court agreed, and explained that Finland's law did not give the importer the opportunity to demonstrate that its electricity produced by a particular method in order to qualify for the rate applicable to domestic electricity produced by the same method.¹³³ It is unclear how the Court would have ruled had Finland provided importers the same variable rates.¹³⁴

4.2.5. Tax on energy Used

Instead of a gasoline tax at the consumer level, government might impose a tax at the producer level based on the amount of energy used in production. If set at high rates, such a tax can reduce the international competitiveness of energy-intensive industries. Two responses to this loss of competitiveness are in use. One is to grant tax exemptions to the most energy-intensive industries. This is the approach sometimes used in Europe for high energy taxes. The other is to provide for a border tax adjustment on imports and exports. Because the tax is not a straight levy on an imported product, it is interesting to recall that when the U.S. House of Representatives passed a Btu (British thermal unit) tax in 1993, it include a provision for a border tax adjustment, which was criticized by the European Communities as a GATT violation.

Both responses to a loss of competitiveness, tax exemptions and border tax adjustments, present trade law concerns. If a government generally imposes a high energy tax but then exempts particular industries, such an exemption might be viewed as a specific subsidy that would be actionable under the WTO Agreement on Subsidies and Countervailing Measures (SCM). Furthermore, if an exemption is targeted to industries that export, it might be viewed as an export subsidy illegal under the SCM. The other option, a border tax adjustment, is problematic for energy because that is a murky area law. Indeed, the WTO Secretariat has recently opined that a tax on the energy consumed in producing a ton of steel "cannot be

¹³² Finland's assumption was that because only some of the foreign electrical generator's production is exported, there is no way for the importing country to determine how that particular electricity was generated, given that electricity is fungible. By contrast, because the total amount of domestic electrical generation is taxed, the tax can be calculated using the proportions of various production processes.

¹³³ *Otokumpu Oy*, para, 39.

¹³⁴ Kramer, Ludwig (2002), *Casebook on EU Environmental Law*, Hart Publishing, p. 125.

applied to imported steel, even if it is charged on domestically produced steel”, and even though this difference in treatment would make the imported steel cheaper and less environmentally friendly.¹³⁵

To understand the legal uncertainty regarding border adjustments for energy, one should start with the basic contours. According to the GATT, nothing prevents a government from imposing at the time of importation a charge equivalent to an internal tax on a like article from which the imported product has been manufactured “in whole or in part.”¹³⁶ This principle became a key issue in the *Superfund* case of 1987.¹³⁷ This was the first GATT based legal challenge to a domestic environmental tax. The United States had imposed an excise tax on some harmful chemicals produced domestically. In addition, the U.S. government taxed imported substances based on the content of “chemicals used as materials in the manufacture or production of the imported substance” when those chemicals were subject to U.S. taxation.¹³⁸ The European Economic Community challenged this border adjustment on several grounds, but the GATT panel dismissed this effort to prevent border adjustments for an environmental tax.¹³⁹ The panel held that whether a tax is enacted for revenue or to encourage rational use of environmental resources is irrelevant to the legality of the border adjustment.¹⁴⁰ The holding in *Superfund* permitting the border adjustment would apply, in principle, to any ingredient physically present in the imported product.

How the *Superfund* holding would apply to materials or energy used in manufacturing a product is uncertain. Such materials would not be physically present in the final product. In 1970, a GATT Working Party was constituted to examine “Border Tax Adjustments,” and this report has often been cited authoritatively in subsequent jurisprudence.¹⁴¹ The Working Party agreed that taxes directly levied on products (e.g. a sales tax) are eligible for a tax adjustment, and taxes not levied on products (e.g. a payroll tax) are not eligible for adjustment. Yet the Working Party was unable to agree on the status of adjustments for “hidden taxes,” which are taxes on capital equipment, advertising, energy, machinery,

¹³⁵ See Environmental Charges and Taxes, available at http://www.wto.org/english/tratop_e/cte03_e.htm. (last accessed on 15 June 2011)

¹³⁶ GATT Article 11:2(a).

¹³⁷ United States: Taxes on Petroleum and Certain Imported Substances, GATT, BISD 34S/136 (June 17, 1987).

¹³⁸ *Ibid.* paras. 2.5, 5.2.8.

¹³⁹ *Ibid.* paras. 5.2.7-5.2.8.

¹⁴⁰ *Ibid.* para. 5.2.4. The *Superfund* decision did not consider GATT Article XX.

¹⁴¹ Border Tax Adjustments, GATT, BISD 18S/97.

transport, and other services.¹⁴² The category of hidden taxes includes many excise taxes that are of interest in the current climate change debate, such as taxes on energy, refrigerants, cleansers, and transport used in the production process. Whether or not such a tax adjustment on imports would meet the WTO's border adjustment rules would seem determinative of its legality. While one can easily see a competitiveness rationale to use a border tax adjustment, it is difficult to visualize a valid environmental reason under GATT Article XX in support of a border adjustment.

In sum, upstream or downstream taxes on energy can be a valuable climate change instrument, and, so far, WTO case law has not diminished options for determining the best point of compliance.¹⁴³ Governments considering such taxes and border adjustments should design them carefully, taking into account WTO law and using any space created by legal ambiguities.¹⁴⁴

4.3 Product Regulations and Standards

In the WTO lexicon, "regulations" are defined as mandatory instruments and "standards" are defined as non-mandatory. The analysis below will follow WTO usage. Both regulations and standards are important components of climate change law and policy, and may be increasingly so in the future. Some examples are regulations/standards on automobile fuel economy, emissions reduction in manufacturing, and energy efficiency in homes. Being mandatory, regulations are imposed by governments. Standards, however, can be authored by numerous actors, e.g. governments, international organisations, private bodies, and nongovernmental organisations. Furthermore, an economic or social actor can impose a standard upon itself. For example, an Olympic Committee or a corporation can commit to emission reduction goals.

The application of WTO rules to climate change regulations and standards is explained below through hypotheticals situations.

¹⁴² Ibid. para. 15.

¹⁴³ Fischer, Hoffman, and Yoshino, (2002). Multilateral Trade agreements and Market-Based Environmental Policies, RFF Discussion Paper, May.

¹⁴⁴ Bierman and Brohm (2003). Implementing the Kyoto Protocol without the United States. The Strategic Role of Energy Tax Adjustments at the Border, Global Governance Working Paper, No. 5, January.

4.3.1 Fuel Economy Regulation

A fuel economy regulation will be subject to the same National Treatment requirements as a fuel economy tax. More importantly, however, such a regulation will also be subject to the discipline of the WTO Agreement on Technical Barriers to Trade (TBT), which is more stringent than those in the GATT.¹⁴⁵ The most onerous substantive requirements are that a regulatory measure is the least-trade-restrictive way to fulfill a legitimate objective and the measure is based on an international standard unless that standard would be ineffective or inappropriate means to fulfill a legitimate objective. The TBT Agreement includes the protection of the environment in an illustrative list of legitimate objectives.

Consider the example of Japan's automotive fuel efficiency law. In 1998, Japan announced that it would be promulgating binding regulations for energy efficiency of nine classes of automobiles grouped by weight of the vehicle. The target in the year 2010 for each class was pegged at the "top runner," which happened to be a Japanese vehicle. Manufacturers selling vehicles in a weight class that cumulatively perform less well on average than the top runner are to be assessed a penalty. Several governments complained about this regulation, and called it a violation of the TBT Agreement.¹⁴⁶ The dispute was never brought to the WTO, however, and Japan has expressed confidence that its regulation conforms to TBT.

One lesson from this episode is that any national regulation having a disparate trade effect on foreign producers will raise concerns under TBT. The underlying problem is that the regulator may center attention on one attribute that may be relatively less important in other countries. In this episode, Japan was most concerned about fuel economy, but imported vehicles that are heavier may reflect competing concerns in the country of manufacture about pollution or safety.

¹⁴⁵ It should be noted that the stringency gap between TBT and the GATT is narrowing. In the *Asbestos case*, the WTO Appellate Body interpreted the GATT Article XX (b) exception to require the use of a less trade restrictive alternative, if available, to achieve the same end. European Communities – Measures Affecting Asbestos and Asbestos Containing Products, Report of the Appellate Body, WT/DS135/AB/R, para. 172 (adopted Apr. 5, 2001). This was the first time that any GATT or WTO panel had imposed such a stringent requirement on a government seeking to rely on the GATT's life or health exception.

¹⁴⁶ Yamaguchi, Mitsutsune. (2003). implementing the Kyoto Protocol Target and their impacts on trade: focusing on Japanese Automobile Fuel Efficiency Standards, available at <http://www.gets.org/gets/harmony/projectpapers.html>.

4.3.2 HFC Regulation

Some regulations are based on product characteristics or the absence thereof. An example is the Danish law to prohibit after 2007 the sale or importation of products containing hydro-fluorocarbons (HFC), a potent greenhouse gas used in refrigerators (Atlantic Council 2002, pp. 22-23). European and U.S. trade associations expressed concern that this legislation could violate the TBT Agreement. One argument made was that HFCs are harmless if they do not leak, and therefore, the legitimate climate objectives of Denmark can be achieved in a less trade-restrictive way.

4.3.3 Voluntary Standard

Corporate action to adopt voluntary climate change standards has become increasingly salient. A standard that is exclusively internal to a company is not covered by the TBT Agreement even if it has transborder effects. Yet when a standard-setting organisation devises a standard, it can come within the scope of these rules. The TBT Agreement permits any standardizing body (in a WTO Member country) to accept the TBT Code of Good Practice for the preparation, adoption and application of standards.¹⁴⁷ Some of the most important norms in the code for climate standard-setting are the procedural provisions. For example, the requirement that interested parties be given 60 days to submit comments can assist in the design of fair and effective standards.¹⁴⁸

4.3.4 Climate Labeling

Labeling is a key instrument of environmental law and policy implemented via the market. Because everyone contributes to GHG emissions, encouraging individual responsibility can be an important component of an overall climate change law and policy. In order to act knowledgeably, however, individual need information about the environmental impact of production and consumption. If it turns out that the WTO inhibits such information flows that

¹⁴⁷ TBT Code of Good Practice for the preparation, adoption and application of standards (Article 4.1). The Code was written by governments during the Uruguay Round without conducting any multilateral consultation with standard-setting bodies.

¹⁴⁸ *Ibid.* para. L.

would present a serious problem. In recent years, the trade community has criticised eco-labels, even private, voluntary ones.¹⁴⁹

Labels that describe the characteristics of a good are unlikely to conflict with WTO rules. For example, the European Community has directed Member States to require a label for new automobile models that would display information about fuel consumption and carbon dioxide (CO₂) emissions. So long as such a label applies equally to domestic and imported cars, it would seem to be consistent with both GATT and TBT rules.

By contrast, mandatory labels regarding the production process could trigger a WTO-based challenge. Many climate-related life cycle labels are imaginable. Suppose that government requires a product to be labeled with information regarding the GHG emitted during its production process. How TBT obligations would apply to such a label is not settled in WTO law. Because the scope of the TBT Agreement is limited to regulations/standards on product characteristics and their related processes, many trade law experts had assumed that so-called unrelated processes, such as the type and quantity of energy used in manufacturing were beyond the TBT's purview.¹⁵⁰ But in 1997, the WTO's TBT Committee asked governments to provide notification of all new labeling schemes by standardizing bodies, including process-related labels.¹⁵¹ If the WTO moves to assert jurisdiction over all labels, then the various TBT requirements will become more constraining factors in designing and applying climate-related labeling.

Some trade law experts argue that WTO law would almost certainly prohibit a government from requiring a label specifying the level of GHGs emitted in the production process.¹⁵² An analogous issue that arose in the WTO was a proposal by the Netherlands to require a label identifying whether timber was harvested under sustainable forestry management. When the WTO was notified of this measure, several governments raised objections on the grounds that such a measure would violate trade rules.¹⁵³ The proposal was also criticised within the

¹⁴⁹ Vitalis, Vangelis. (2002). Private Voluntary Eco-Labels: Trade Distorting, Discriminatory and Environmentally Disappointing, Organisation for Economic Co-operation and Development.

¹⁵⁰ Petersmann, Ernst-Ulrich. (1995). International and European Trade and Environmental Law after the Uruguay Round, Kluwer Law International.

¹⁵¹ Lopez-Hurtado, Carlos. (2002). Social Labeling and WTO Law, *Journal of International Economic Law* 5: 710.

¹⁵² Appleton, Arthur E. (2001). The World Trade Organisation's View: Emissions Reduction in a Free Trade World, Swiss Re Centre for Global Dialogue, October.

¹⁵³ WTO, Committee on Technical Barriers to Trade, Specific Trade Concerns related to Labeling brought to the Attention of the Committee since 1995, G/TBT/W/184, Item 18 (October 4, 2002).

European Union. In face of these objections, the Dutch government did not finalise the proposal.

4.4 Subsidies

Governmental subsidies are helpful to whoever receives the subsidy, but have a variable value for the commonweal. When poorly conceived or designed, subsidies can make societies worse off by exacerbating market or government failures. The governmental community often criticises perverse subsidies that aggravate environmental damage (e.g. subsidies for coal extraction) and distort markets. The trade community often criticises subsidies that distort international trade, both within the subsidizing country and in other markets if the subsidised products are exported.

The WTO rules on subsidies are contained in the SCM Agreement and the Agreement on Agriculture. Non-agricultural subsidies can raise WTO concerns if they are “specific” that is, if they are channeled to certain enterprises. If a specific subsidy causes adverse effects to competing entities in foreign countries, then it can be actionable in the WTO.¹⁵⁴ Government grants to the automobile industry to develop new technologies, or subsidies for afforestation, could be “specific,” especially in the absence of objective criteria for eligibility. An agricultural subsidy to sequester carbon in soil, or to reduce GHG emissions from rice cultivation or raising cattle, would be permitted under the “Green Box” (in the Agreement on Agriculture) so long as the subsidy did not have more than minimal effects on productions.¹⁵⁵

The transborder applicability of the WTO’s expert subsidy rules may also be important in climate change law and policy. If government A subsidises entities in Country B so as to promote exports from country A, such a subsidy may be prohibited by the SCM Agreement.¹⁵⁶ These disciplines will need to be examined in designing climate partnership programs between industrial and developing countries.

¹⁵⁴ An actionable subsidy is a specific subsidy that (1) injures the domestic industry of another country, (2) nullifies or impairs WTO benefits, or (3) causes serious prejudice to another country (SCM Agreement, Article 5) A country harmed by such a subsidy could challenge it in the WTO or impose a countervailing duty on imports of goods benefiting from such a subsidy if the required domestic injury can be shown.

¹⁵⁵ Agreement on Agriculture, Annex 2, paras. 2(g), 12.

¹⁵⁶ SCM Agreement, Article 3, Annex I, paras. (j), (k); Agreement on Agriculture, Article 10.4. In the Foreign Sales Corporation case, the WTO panel assumed (in accord with both parties) that a subsidy under the SCM Agreement could include a subsidy that confers a benefit exclusively outside the territory of the government

4.5 Domestic Emissions Trading

Because of the wide range of implementation costs in reducing GHG emissions, domestic programs with flexible emissions trading can reduce overall costs. Emissions trading can be carried out under the aegis of an international treaty, under national regulation, or in voluntary programs. Emissions' trading between economic actors in the same country does not raise any WTO-related concerns. The WTO problems, if they exist, are in the interface between the trading programs in two countries. If country A's trading rules make it harder for an economic actor in country B to do business with actors in country A that could trigger a complaint to the WTO by country B.

A threshold question is whether "emissions trading" (as discussed in Article 17 of the Kyoto Protocol) is even covered by WTO rules. Sometimes analysts mistakenly assume that WTO rules would ineluctably govern world trade in climate units. Despite its name, the WTO does not govern trade itself. What it governs are the trade restrictions that nations impose on transborder trade in goods and services.

Marketable rights created via an emissions trading regime are unlikely to be a "service" or "good" that fits under the scope of the WTO's General Agreement on Trade in Services (GATS) or the GATT.¹⁵⁷ So far, governments have not suggested that trade in rights created by a government are within the purview of the WTO. For example, regulations on the transborder sale of a land title, a license, a patent, sovereign debt, and currency are not covered by WTO rules.¹⁵⁸ Indeed, the GATS Annex on Air Transport Services specifically excludes "traffic rights, however granted."¹⁵⁹

Yet even though emissions trading per se is not supervised by WTO rules, these rules may come into play when: (1) there is government involvement in the emissions trading system and (2) emissions trading affects the flow of trade in goods and services. Thus, emissions

providing the subsidy. The panel reserved judgment on this legal point however. United States, Tax Treatment for "Foreign Sales Corporations," Recourse to Article 21.5 of the DSU by the European Communities, Report of the Panel, WT/DS108/RW, para. 8.63 (adopted Jan. 29, 2002).

¹⁵⁷ Wisner, Glen. (2002). *Frontiers in Trade: the Clean Development Mechanism and the General Agreement on Trade in Services*, *International Journal of Global Environmental Issues* 2: 288.

¹⁵⁸ Nevertheless, there may be scope in GATS Article XVIII (Additional Commitments) for a government to make a commitment on government-created rights, including perhaps emissions trading.

¹⁵⁹ GATS Annex on Air Transport Services, para. 2(a).

trading can have indirect effects on commerce that might lead to a violation of trade rules.¹⁶⁰ For example, suppose that country A has a GHG trading system that does recognise emission units originating in countries outside the Kyoto Protocol.¹⁶¹ Such a requirement might make it harder to import energy products from non-Parties because fuel producers therein might not have emission units to accompany sales. That could infringe the GATT Article III national treatment rule because it would destabilise competition between imported and domestic products, giving less favorable treatment to the foreign product.¹⁶² In that scenario, country A seeks to offer a defense under GATT article XX, such as the impracticality of verifying foreign units.

Another concern regarding emissions trading is whether the free transfer by governments of units to private companies would be considered a subsidy. One analyst has cogently argued that the allocation of an allowance is not a “financial contribution” by a government within the definition of subsidy in the SCM Agreement.¹⁶³ Recent WTO jurisprudence has planted some doubts, however. In the WTO *Lumber* decision, the panel ruled that a financial contribution is not limited to a money-transferring action, but also encompasses an in-kind transfer of resources that can be valued, such as the “right” to harvest public trees.¹⁶⁴ This ruling might suggest that the giveaway of a valuable emission right by a government is a subsidy. Of course, the *Lumber* precedent is distinguishable from a GHG emission because lumber itself is a traded good in a way that an emission is not.

¹⁶⁰ Werksman, Jacob. (2001). Greenhouse-Gas Emissions Trading and the WTO: 153. In: *Inter-linkages. The Kyoto Protocol and the International Trade and Investment Regime*, W. Bradnee Chambers (Ed.), United Nations University Press, 2001.

¹⁶¹ For example, the European Community’s Greenhouse Gas Emission Trading system provides for mutual recognition of allowances from non-EC countries that have ratified the Kyoto Protocol. The Directive says nothing about non-ratifying countries. See Council Directive 96/61/EC (amended Dec. 9, 2002), Article 12.1, 24, and Communication from the Commission to the European Parliament, SEC (2003) 364 (Mar. 25, 2003), para. 3.2.1.

¹⁶² Another claim would be a violation of GATT Article I (Most favored) on the grounds that it is easier to import products from Kyoto Protocol parties than from non-parties.

¹⁶³ Petsonk, Annie. (1999). The Kyoto Protocol and the WTO: Integrating Greenhouse Gas emissions Allowance Trading into the Global Marketplace, *Duke Environmental Law and Policy Forum* 10: 185.

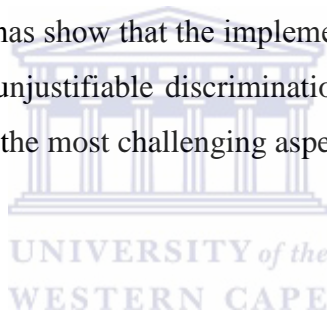
¹⁶⁴ United States, Preliminary Determinations with Respect to certain Softwood Lumber from Canada, Report of the Panel, WT/DS236/R, paras. 7.17-7.29 (adopted Nov. 1, 2002).

4.6. Conclusion

The general approach under WTO rules has been to acknowledge that some degree of trade restriction may be necessary to achieve certain law and policy objectives, as long as a number of carefully crafted conditions are respected. WTO case law has confirmed that WTO rules do not trump environmental requirements. If, for instance, a border measure related to climate change was found to be inconsistent with one of the core provisions of the GATT, justification might nonetheless be sought under the general exceptions to the GATT (i.e. Article XX), provided that two key conditions are met.

First, the law measures must fall under at least one of the GATT exceptions, and a connection must be established between the stated goal of the climate change law and policy and the border measure at issue.

Second, the manner in which the measure in question will be applied is important: in particular, the measure must not constitute a “means of arbitrary or unjustifiable discrimination”. GATT case law has show that the implementation of a measure in a way that does not amount to arbitrary or unjustifiable discrimination or to a disguised restriction on international trade has often been the most challenging aspect of the use of GATT exceptions.



CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

1. CONCLUSIONS

Interaction between trade and climate change law and policy contains potential conflict. How big potential of the conflict is difficult to estimate, to a large extent because of the indefinite relationship between the rights and obligations of countries under the WTO Agreements and their rights and obligations under the UNFCCC or any future international climate agreement. Although the international climate change regime (the UNFCCC and the Kyoto Protocol) does not explicitly provide for the use of trade-related measures, in the absence of a post-Kyoto international agreement trade measures will likely be taken unilaterally, in the form of border adjustments to level the playing field for domestic producers in countries with emission reduction commitments and to prevent carbon leakage to countries with lax emission controls. Carbon-related border adjustment measures (BAMs) will most probably run afoul of WTO rules on non-discrimination and WTO disciplines on subsidies, primarily as these measures would be imposed not on product directly but on emissions happened abroad, i.e. on the way the products were produced.

If carbon-related BAMs were designed to be compliant with conditions stipulated by GATT Article XX, they would have chances to be defended as a life/health and/or environmental exception to the GATT obligations. As the analysis in the paper shows, meeting the requirement of chapeau of Article XX to take into account conditions in other countries would be crucial. In practice, it would mean that a measure should be flexible enough to treat more favourably imports from countries, which have taken emission reduction efforts in any form, and to differentiate in treatment depending on a country's level of economic development. A measure should also take into account the rights and obligations of an exporting country under an international climate change agreement. And finally, to fit in the scope of Article XX, it seems to be more reasonable to position a measure as simply a border measure (e.g. a carbon tariff), rather than a border adjustment measure. A border adjustment measure might fall outside the scope of Article XX due to its intrinsic competition-related motive of levelling the playing field of producers and because of traditionally symmetric application of border adjustment, not only imposing emission charges on imports but also

giving rebate (of allowances/emission costs) to exporters, which would run contrary to climate change law and policy goals. Therefore, a country intending to defend a measure as an exception to its GATT obligations should from the very beginning adjust the design and the implementation of a measure to pass the justification test under Article XX.

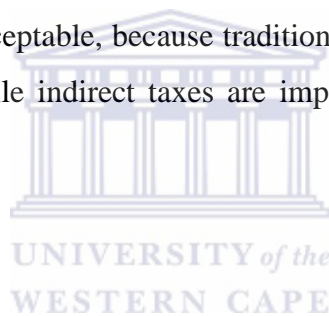
Although justification of a carbon-related BAM under GATT Article XX is not entirely excluded, it will be quite difficult to design and implement a measure in a way which would satisfy the conditions of Article XX, especially its chapeau. Furthermore, justification of violations by a measure of GATT rules under GATT Article XX can be made each time only through litigation in the WTO. This implies that the problem of non-compliance will have to be resolved each time anew. Therefore, there seems to be a need for long-lasting institutional solutions to the problem of WTO non-compliance of carbon-related BAMs.

As this paper shows, there are a number of institutional solutions to the problem of WTO inconsistency of carbon-related BAMs that could be discussed. These solutions may be achieved through multilateral, plurilateral and bilateral negotiations and even through adjudication by the WTO dispute settlement bodies. Yet, each of them lacks either feasibility or effectiveness. Most of them would lack political will necessary for their adoption: to reach consensus or the necessary vote on the use of measures, which negatively affect economic interests of the majority of (developing) countries would be hardly possible. Solutions adopted plurilaterally (i.e. only by those countries which agree to them) would lack effectiveness, as they could be easily surmounted by non-agreeing parties.

Of all approaches to address the problem of WTO inconsistency of carbon-related BAMs, which were discussed in this paper, the bilateral approach seems most feasible. It be possible to include provisions on carbon-related BAMs, including mutual recognition of climate change law and policy actions and refraining from using BAMs, in bilateral and regional FTAs and economic cooperation agreements. The experience of the WTO shows that many sensitive trade-related issues were first negotiated bilaterally or at the regional level and only then were brought to the multilateral negotiations. Provisions on climate change law and policy trade-related measures would be just part of a much broader economic cooperation agreement, which included trade, investment, government procurement and other issues. Therefore, even if such provisions were contrary to the interests of one of the parties to the agreement, there would always be something which would be given by the other parties in compensation for this. Nothing would preclude negotiating on carbon-related BAMs,

especially if one of the parties is a developed country which can exercise its political and economic power or can offer concession in other areas. The inclusion of provisions on carbon-related BAMs in FTAs would largely depend on the objectives, nature and scope of the agreements.

As to the idea of following the origin principle of taxation instead of the destination principle, notwithstanding it is an ideal solution in terms of environmental effectiveness and administrative efficiency, it is problematic. It requires universal application and harmonisation of emissions taxes or establishment of a global emissions trading scheme with a global price on carbon. In the absence of universal carbon constraints, the origin-based emissions taxes or charges cannot address the problem of competitiveness and carbon leakage. Furthermore, except in the case of carbon incentive sectors producing for local consumption, to level the playing field, emissions charges will still need to be imposed on imports from countries with no carbon constraints. Such a hybrid system of taxation will complicate the issue of WTO compliance even further. From a WTO perspective, origin-based emissions taxes are not acceptable, because traditionally the origin principle is applied with respect to direct taxes, while indirect taxes are imposed according to the destination principle.



2. RECOMMENDATIONS

2.1. Establishing an international standard for catalytic converters. Achieving minimum standards on energy efficiency or definitions of clean energy would provide several benefits. One is trade facilitation stemming from harmonization. Another is inducing technological breakthrough from larger potential markets. Taking note of the role of the catalytic converter in promoting the phaseout of leaded gasoline, Scott Barrett has suggested that common technology standards can be used to reduce GHG emissions from automobiles or from fossil-fuel power plants.¹⁶⁵

International product standards are proposed in many fora, the most prominent of which is the International Organisation for Standardisation (ISO). In recent years, the ISO has set up a Climate Change Task Force and begun developing standards programs, such as the

¹⁶⁵ Barrett, Scott (2001). Towards a better climate treaty, AEI-Brookings Joint Center, November.

International Energy Conservation Code. For automotive standards, the Economic for Europe's World Forum for Harmonisation of Vehicle Regulations is starting to consider standards for hybrid and hydrogen fuel cell vehicles.

TBT Article 2.4 promotes the expanded use of international standards, stating that:

Where technical regulations are required and relevant international standards exist or their completion is imminent, Members shall use them or the relevant parts of them, as a basis for their technical regulations except when such international standards or relevant parts would be an ineffective or inappropriate means for the fulfillment of the legitimate objectives pursued, for instance because of fundamental climatic or geographical factors or fundamental technological problems.¹⁶⁶

Building on the above TBT rule, the WTO could collaborate with the UNFCCC to promote minimum international (or regional) standards pertinent to climate. Addressing global warming would be an ideal objective to test the possibilities of new efforts to bring together trade, energy, and environmental officials at the national and international levels. The governments could encourage standard-setting institutions to accelerate the development of climate-related standards, and once such international standards are devised in a suitable manner, governments could use them as a basis for technical regulations.

2.2. Facilitating taxes on energy. In view of the negative environmental externalities caused by the production and consumption of energy, strong grounds exist to subject energy to greater taxation. Several governments have made energy or GHG taxes a major part of strategies to combat climate change. A coordinated approach to national energy taxes could be an effective and flexible way to control emissions without leading to inter-country distortions.¹⁶⁷ Although the idea of getting governments to agree on a uniform rate of energy taxation has been discussed for years. Very little progress in that direction has been made at the global level, or even within customs and free trade agreements. Looking ahead, the outlook for such agreements remains poor.

It may be possible, however, to seek harmonization on technique rather than tax level. As chapter IV explained, while many energy taxes and border tax adjustments can be applied

¹⁶⁶ Relatedly, TBT Agreement art. 12.4 states a recognition that developing countries should not be expected to use international standards that are not appropriate to their development, financial, and trade needs.

¹⁶⁷ Victor, David G. (2001). *The collapse of the Kyoto Protocol and the struggle to slow global warming*, Princeton University Press.

without contradicting WTO rules, some forms of taxation may lead to trade disputes. Such disputes may be fomented when governments engineer taxes to favor homegrown energy sources and to gratify public biases against particular energy sources, such as nuclear. In other words, what will seem a reasonable method of taxation within Country A may, when applied to imports from Country B, seem unfair to economic actors in Country B. Right now, there is a considerable uncertainty within the WTO as to the rules for border tax adjustments on energy. If these uncertainties are left to resolution by a WTO panel, the results may be unsatisfactory from an environmental standpoint.

2.3. Opening markets for environmental and energy goods and services. Liberalizing of trade in environmental goods and services was on the negotiating agenda for the Doha Round. The climate imperative is to convince governments, particularly in developing countries, to eliminate unjustified barriers to technology and services related to climate change mitigation and the CDM. One obstacle to fruitful negotiations on environmental technology is that this sector is poorly mapped in WTO classifications, and so the scope for beneficial liberalization is often not appreciated.¹⁶⁸ WTO negotiations on the movement of natural persons supplying services can also be important for climate law and policy by facilitating the entry of foreign technicians to offer de-carbonisation services in developing countries.

2.4. Expanding subsidy law. The WTO has complex rules on subsidies that are stronger than in the GATT era, yet still far from comprehensive. If there is any conceptual thread that knits the rules together, it would be distaste for subsidies that potentially distort international trade. Yet while that is an appropriate purpose, the WTO could aspire to do more by helping governments eliminate subsidies with high negative externalities.

Although one strain of the ecological critique of trade law over the past decade has been that GATT/WTO rules are too stringent, environmentalists have also observed that on some issues, trade rules are too weak. After all, many government subsidies harmful to the global environment are not impeded by WTO rules. The worst offenders are the subsidies for the development of fossil fuels and for unsustainable harvesting of timber. Some agricultural subsidies by the richest countries are also deplorable, as they make it harder for poor countries to gain income through exports.

¹⁶⁸ Andrew, Dale (2003). "Modernizing the list of environmental service: OECD Proposals." In: United Nations Conference on Trade and Employment, Discussion Paper No. 164, November.

Perhaps the most significant environmental achievement in the Doha Declaration was the mandate for negotiations on fisheries subsidies. If this initiative were successful in curtailing such subsidies, it would establish an important precedent for WTO action on other environmentally damaging subsidies. For example, a future trade initiative could address perverse subsidies that worsen climate change. At a recent meeting of the WTO Committee on Trade and Environment, Saudi Arabia advocated the removal of coal and gas subsidies.¹⁶⁹ Such discourse shows the potential for some convergence with the Kyoto Protocol which calls on Annex I parties to implement “policies and measures” including: “Progressive reduction or phasing out of market imperfections, fiscal incentives, tax and duty exemptions, and subsidies in all greenhouse gas emitting sectors that run counter to the objection of the (UNFCCC) Convention and application of market instruments ...”¹⁷⁰

2.5. Safeguarding eco-labeling. Environmental labeling was in the WTO’s Doha Round Agenda, but a decision was not yet been made as to whether negotiations on rulemaking should be launched. The underlying problem is that trade rules cast a shadow over mandatory and voluntary labeling systems because, the meaning of those rules is unclear. The trade regime has a valid interest in assuring that labels do not impede trade through misinformation or unjustified inferences. The climate change regime has a valid interest in assuring that labels and seals can be used to inform the public about the ecological footprint of products, in order to encourage market-based solutions to environmental challenges.

Thus, the two regime have a basis to work together to assure that WTO law does not constrain well-designed climate labels. Right now, it seems doubtful that climate interests are being voiced in the WTO. If the WTO launches negotiations on labeling, those missing interests need to be forced in. whatever negotiations the WTO commences could be facilitated by the ISO, which is developing a series of standards for environmental labeling.

2.6. Improving recoordination between the climate change and international trade regime. So far, the WTO has remained largely aloof from efforts to address climate change. Other organizations, such as the World Bank, the Organisation for Economic Co-operation and Development, and the UN Conference on Trade and Development, have recognized that climate change is an important global issue, and have responded constructively. Despite the

¹⁶⁹ WTO Committee on Trade and Environment, Report of the Meeting held on 8 October 2002, WT/CTE/M/31, para. 63 (Dec. 2, 2002). Saudi Arabia is a WTO observer.

¹⁷⁰ Kyoto Protocol, article 2.1 (v)

fact that the WTO is trying to increase its attention to development, the WTO, as an intergovernmental organization, has not yet connected climate issues to trade and investment.

Although these observerships are useful in improving mutual understanding, much more institutional cooperation could be attempted. The WTO General Council and the various WTO subsidiary bodies (such as the TBT Committee) could explore ongoing relationships with the conferences and meetings of the parties of the climate regime, and its subsidiary bodies. This would allow climate and trade officials from numerous countries to work together. One possibility might be a joint WTO/UNFCCC working group.¹⁷¹ The fact that the states in the WTO are not the same as in the UNFCCC is no barrier to holding joint meetings. Certainly, adequate authority exists under WTO rules for such inter-regime cooperation.¹⁷²

2.7. Integrating climate change and trade bargaining. Some analysts have suggested that governments could bargain simultaneously on climate and trade in order to achieve deals that would be unattainable in separate fora.¹⁷³ This proposal should not be dismissed outright on grounds of imagined regime purity. Instead, such interlacing should be assessed on its own merits.

One clear impediment is the MFN rule. If country A agrees to lower its trade barriers in return for country B's agreement to regulate internal emissions, then A will have to give the same trade benefit not only to B, but also to C, D, etc., even though those countries have not agreed to reduce emissions. This is not a fatal problem, because MFN is already inherent in trade negotiations. Nevertheless, MFN does undermine the viability of "climate for trade" deals.

¹⁷¹ Assuncao and Zhang (2002), Domestic Climate Policies and the WTO, United Nations Conference on Trade and Employment, Discussion Paper NO. 164, November. P. 25

¹⁷² Marrakesh Agreement Establishing the WTO, art. V: 1; GATT arts. XXXVI:7, XXXVIII:2(b)

¹⁷³ Whalley, John and Ben Zissimos (2002). Making environmental deals: the economic case for a world environment organization. In: Global Environmental Governance, Options and Opportunities, Daniel C. Esty and Maria H. Ivanova (Eds.), Yale school of Forestry and Environmental Studies, 2002.

BIBLIOGRAPHY

I. BOOKS

Barrett, S. (2001). “*Towards a better climate treaty*”, AEI – Brookings Joint Center

Charnovitz S. (2003), *Trade and climate: potential for conflicts and synergies*, Pew Center on global climate, Washington DC.

Cottier, T. and Matthias O. (2005), *International Trade Regulation: law and policy in the WTO, the European Union and Switzerland; cases, materials and comments*. Staempfli Publishers Ltd., Berne

Hufbauer, G. C., Charnovitz, S. and Kim, J. (2009), *Global Warming and the World Trading System*, Peterson Institute for International Economics, Washington, DC, March 2009

Hunter, D., J. Salzman and D. Zaelke (2007), *International law and policy*, 3rd Eds, Foundation Press, New York

Kiss A. and Shelton, D. (2007). *Environmental protection in other subject areas of international law*. Leiden, Boston: Martinus Nijhoff Publishers

Mc Rae, Donald M. (2000), “GATT Article XX and the WTO Appellate body”, in Marco Bronckers and Reinhard Quick (eds.) *New Directions in International Economic Law: Essays in Honour of John H. Jackson*, (The Hague: Kluwer Law International, 2000)

Pauwelyn, J. (2007), “U.S. Federal Climate Policy and Competitiveness Concerns: the Limits and Options of International Trade Law”, Nicholas Institute for Environmental Policy Solutions, Duke University (Durham, NC)

P. Birnie, A. Boyle and C. Redgwell (2009), *International law and the Environment*, 2nd edition, Oxford, University

Sands, P. (2003). *Principles of international environmental law*, 2nd ed., Cambridge University Press (The Eagle Gallery, London)

Toman M. A. (2001). *Climate change economics and policy: an RFF anthology*. Washington: Resources for the future

II. ARTICLES IN JOURNALS AND CHAPTERS IN BOOKS

Abbas, Mehdi (2008), "Trade policy and Climate Change: Options for A European Border Adjustment Measure", Working Paper, LEPIL, Grenoble University, September 2008.

Aldy, Joseph E., Peter R. Orszag, and Joseph E. S. (2001). Climate Change: An Agenda for Global Collective Action, Paper Prepared for the conference on "The timing of climate Policies," Pew Center on global Climate Change, October

Andrew, D. (2003). "Modernizing the List of environmental Services: OECD Proposals." In: United Nations Conference on Trade and Development, Energy and environmental Services: Negotiating Objectives and Development Priorities, UNCTAD/DITC/TNCD/2003/3: 331

Appleton, A. E (2001). The World Trade Organisation's view: Emissions Reduction in a Free Trade World, Swiss Re Centre for Global Dialogue, October

Bacchus, J. (2010), "Questions in search of answers: trade, climate change, and the rule of law". *Keynote address to the conference on "climate change, trade and competitiveness: issues for the WTO"*, Geneva, 16 June 2010

Biermann, Frank, Bohm, Frederic, Brohm, Rainer, Droge, Susanne and Trabold, Harald (2003), *The Polluter Pays Principle under WTO Law: The case of National Energy Policy Instruments*. Research Report, Environmental Research of the Federal Ministry of the Environment, Nature Conservation and Nuclear Safety

Brack, D., Michael G., Craig W., (2000), *International trade and climate change policies*. (The Royal Institute of International Affairs). Earthscan, London.

Brewer, T. L. (2003). "*The trade regime and the climate regime: institutional evolution and adaptation*". *Climate policy*, 3: 329-341

Bronckers, M. and McNelis, N. (2000), "Rethinking the "Like Product" Definition in GATT 1994: Anti-Dumping and Environmental Protection", in Marco C.E.J. Bronckers *A Cross-Section of WTO Law*, Cameron May, 2000

Cameron, J. and Zen M. (1994). *Implementation of the United Nations Framework Convention on Climate Change: international trade law implications*: 116

- Cosbey, A. (2009), “Achieving Consensus: Multilateral Trade Measures in Post-2012 Scenarios”, in *Climate and Trade Policies in a Post-2012 World*, UNEP, 2009
- Deal, T.E. (2008), “WTO Rules and Procedures and Their Implication for the Kyoto Protocol”. Discussion Paper, USCIB, January 2008
- Fischer, C., Sandra H., and Yutaka Y. (2002), *Multilateral Trade agreements and Market-Based environmental Policies*, RFF Discussion Paper, May
- Frankel, J. (2005), “climate and Trade: Links between the Kyoto Protocol and WTO”, *Environment*, 47 (7): 8-19
- Gibbs, M. (2003). *Energy services, energy policies and the Doha Agenda*, in United Nations Conference on Trade and Development, *Energy and Environmental services: negotiating objectives and development priorities*, UN Conference on Trade and Employment, UNCTAD/DITC/TNCD/2003/3: 3
- Hoerner, J. Andrew and Muller, F. (1996), “Carbon Taxes for Climate Protection in a Competitive World” – A Paper prepared for the Swiss Federal Office for Foreign Economic Affairs. Environment Tax Program of the Center for Global Change. University of Maryland College Park, June 1996
- Kramer, L. (2002). *Casebook on EU environmental Law*, Hart Publishing
- Lopez-H., Carlos (2002). Social Labelling and WTO Law, *Journal of International Economic Law* 5: 719
- Murase S. (2003), *WTO/GATT and MEAs: Kyoto Protocol and beyond: GETS/FTC/GISPRI Project*
- Petersmann, E.U (1995). *International and European Trade and Environmental Law after the Uruguay Round*, Kluwer Law International
- Petsonk, A. (1999). The Kyoto Protocol and the WTO: Integrating Greenhouse Gas emissions allowance Trading into the Global Marketplace, *Duke Environmental Law and Policy Forum* 10: 185
- Regan, D. H. (2002). Regulatory Purpose and “Like Products” in article III: 4 of the GATT (With additional Remarks on Article III: 2), *Journal of world Trade* 36: 443

Shaw and Schwartz, (2002). “*Trade and Environment in the WTO State of play*” journal of the World Trade, Volume 36. Kluwer Law International: 129-154

Tarasofsky, R. G. (2008), “*Heating up international trade law: challenges and opportunities posed by efforts to combat climate change*”, carbon and climate law Review, I

Van C, G. (2008), “Against Harmonisation – Regulatory Competition in Climate Change Law”, *Carbon and Climate Law Review*, 1

Victor, D. G. (2001). The collapse of the Kyoto Protocol and the struggle to slow Global Warming, Princeton University Press

Vitalis, V. (2002). Private Voluntary Eco-Labels: Trade Distortion and environmentally Disappointing, Organisation for Economic Co-operation and Development

Weischer, L., Simmons, B., Van A., Harro, and Zelli, F. (2009), “*introduction-climate and trade policies in a post-2012 World*” in climate and trade policies in a post-2012 World, UNEP, 2009

Westin, R. A. (1997). Environmental Tax Initiatives and Multilateral Trade agreements. Dangerous Collisions, Kluwer Law International

Werksman, J. (2009), “How Should a Post-2012 Climate Agreement Address Trade-Related Environmental Measures?” in *Climate and Trade Policies in a Post-2012 World*, UNEP, 2009

Whalley, J. and Ben Z. (2002). Making environmental Deals: the Economic Case for a World Environment Organisation. In: Global Environmental Governance, Options and Opportunities, Daniel C. Esty and Maria H. Ivanova (Eds.), Yale School of Forestry & Environmental studies, 2002

Wiers, J. (2002). Trade and Environment in the EC and the WTO. A legal Analysis, Europa Law Publishing

Wiser, G. (2002). Frontiers in Trade: the Clean Development Mechanism and the General Agreement on Trade in Services, *International Journal of Global environmental Issues* 2: 288

Yamaguchi, M. (2003). Implementing the Kyoto Protocol Target and their impacts on Trade: focusing on Japanese Automotive Fuel efficiency Standards

Zarrilli, S. (2003). Domestic Taxation of Energy Products and Multilateral Trade Rules: Is this a case of unlawful discrimination, *Journal of World Trade* 37: 359

III. INTERNATIONAL INSTRUMENTS

AIACC: Assessments of Impacts and Adaptations to climate change (2003-2007), Working papers and publications available at www.aiaccproject.org/publications_reports/Pub_Reports.html (last accessed on 25 June 2011)

CONVENTION ON THE PRIOR CONSENT PROCEDURE FOR CERTAIN HAZARDOUS CHEMICALS AND PESTICIDES IN INTERNATIONAL TRADE 1998 (Rotterdam) (1999) 38 ILM: 1

GENERAL AGREEMENT ON TARIFF AND TRADE 1947/ 1994, available at 33 ILM 28 (1994)

INTERNATIONAL CODE OF CONDUCT ON THE DISTRIBUTION AND USE OF PESTICIDES 1985 (FAO codes)

INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, climate change: the scientific assessment (Cambridge University Press, 1990)

UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT, Agenda 21, chapter 2, section B

IV. INTERNATIONAL CASES

GATT Panel Report, United States - prohibition of imports of Tuna and Tuna products from Canada ("*US-Canadian Tuna*"), L/5198, adopted 22 February 1982, BISD 29S/91.

GATT Panel Report, United States - restrictions on imports ("*US-Tuna (Mexico)*"), DS 21/R, 3 September 1991, unadopted, BISD 39/155

WTO Appellate Body Report, European communities - measures affecting Asbestos and Asbestos-containing products (“*EC-Asbestos*”), WT/DS 135/AB/R, adopted 5 April 2001, DSR 2001: VII, 3243

WTO Appellate body Report, Korea-measures affecting imports of fresh, chilled and frozen beef (“*Korea-various measures on beef*”), WT/DS 16/AB/R, WT/DS 169/AB/R, adopted 10 January 2001, DSR 2001: I, 5

WTO Appellate Body Report, United States-standards for reformulated and conventional Gasoline (“*US-Gasoline*”), WT/DS2/AB/R, adopted 20 May 1996, DSR 1996: I, 3

WTO Appellate Body report, United States-import prohibition of certain shrimp and shrimp products (“*US-shrimp*”), WT/DS58/AB/R, adopted 6 November 1998, DSR 1998: VII, 2755

WTO Appellate Body report, United States-import prohibition of certain shrimp and shrimp products-recourse to Article 21.5 of the DSU by Malaysia (“*US-shrimp (article 21.5-Malaysia)*”), WT/DS58/AB/RW, adopted 21 November 2001, DSR 2001



WESTERN CAPE

V. INTERNET SOURCES

Bio Glossary: Available at: www.everythingbio.com/glos/index.php. [Last accessed on 5 April 2011]

AIACC (*Assessment of Impacts and Adaptations to Climate Change*) (2003-2007). Available at: www.aiaccproject.org/publications_reports/pub_reports.html. (Last accessed on 7 April 2011)

IPCC (2007 b), *glossary of terms used in the IPCC fourth assessment report*. Working groups I, II and III. Available at: www.ipcc.ch/glossary/Index.htm [last accessed on 10 April 2011]

IMO (International Maritime Organization) (2007), *International Shipping and World Trade: Facts and Figures*. Available at: www.imo.org/includes/blastDataOnly.asp/data_id%3D23754/InternationalShippingandWorldTrade-factfigures.pdf (Last accessed on 15 May 2011)

Agreement Establishing the WTO 1994, available at: 33 ILM 13 (1994), <http://www.wto.org> [last accessed on 29 April 2011]

NOVA Science in the News (2009), *Glossary Enhanced Greenhouse Effect-A Hot International Topic*, Australian academy of Science. Available at: www.science.org.au/nova/016/016glo.htm. (Last accessed on 21 April 2011)

The Greenhouse Gas abatement Scheme Available at: <http://www.greenhousegas.nsw.gov.au> (Last accessed on 20 April 2011)

Stellenbosch University: *trade law center* website: www.tralac.org/newsletter [last accessed on 30 April 2011]

UNEP (2007a), *Global Outlook for Snow and Ice*, Editing and production by UNEP/GRID-Arendal. Available at: www.unep.org/gov/geo_ice/. (Last accessed on 23 May 2011)

World Bank (2008a), *Development and Climate Change. A Strategic Framework for the World Bank group*, consultation Draft, august 2008. Available at: <http://siteresources.worldbank.org/EXTCC/Resources/40786312193392338817DevelopmentClimatechange.pdf>. (Last accessed on 28 April 2011)

World Bank Press Release No. 2008/xxx/AFVP. Available at: <http://web.worldbank.org/WEBSITE/EXTERNAL/COUNTRIES/AFRICAEXT/CONGODEMOCRATICEXTN/O,contentMDK:21573424-menuPK:349485-pagepk:2865066-piKP:2865079-the-site:349466,00.html> (Last accessed on 25 April 2011)

WESTERN CAPE