



IMEL
INSTITUTE OF MARINE
& ENVIRONMENTAL LAW

Liberalising trade in climate-friendly goods under the framework of the General Agreement on Tariffs and Trade

Clarissa Ferreira

Student number: FRRCLA006

Supervisor: Michaela Young

Word Count: 21 432 words.

e

I hereby declare that I have read and understood the regulations governing the submission of Research dissertation presented for the approval of Senate in fulfilment of part of the LLM dissertations, including those relating to length and plagiarism, as contained in the rules of requirements for the LLM in approved courses and a minor dissertation. The other part of this University, and that this dissertation conforms to those regulations.
the requirement for this qualification was the completion of a programme of courses.

Signed by candidate

Signature removed



UNIVERSITY OF CAPE TOWN
IYUNIVESITHI YASEKAPA • UNIVERSITEIT VAN KAAPSTAD

The copyright of this thesis vests in the author. No quotation from it or information derived from it is to be published without full acknowledgement of the source. The thesis is to be used for private study or non-commercial research purposes only.

Published by the University of Cape Town (UCT) in terms of the non-exclusive license granted to UCT by the author.

List of Abbreviations and Acronyms

AB	Appellate Body
CFG	Climate-friendly Goods
DMD	Doha Ministerial Declaration
DSB	Dispute Settlement Body
EG	Environmental Goods
EU	European Union
FTA	Free Trade Agreement
GATS	General Agreement on Trade in Services
GATT	General Agreement on Tariffs and Trade
GHG	Greenhouse Gas
GPA	Government Procurement Agreement
ICTSD	International Centre for Trade and Sustainable Development
ITA	Information Technology Agreement
LDCs	Least-developed countries
MFN	Most-favoured-nation
OECD	Organisation for Economic Co-operation and Development
PPM	Process and Production Methods
SCM	Subsidies and Countervailing Measures
SETA	Sustainable Energy Trade Agreement
SETI	Sustainable Energy Trade Initiative

SPS	Sanitary and Phytosanitary
TBT	Technical Barriers to Trade
TRIMS	Trade-Related Investment Measures
TRIPS	Trade-Related Aspects of Intellectual Property Rights
UNFCCC	United Nations Framework Convention on Climate Change
WTO	World Trade Organization

Table of Contents

Table of Contents	iii
Chapter 1	4
Introduction	4
Chapter 2	8
Trade and Climate Change: A multifaceted interface	8
2.1. Climate change impacts on international trade.....	8
2.2 International trade impacts on climate change	9
2.2.1 Negative impacts	9
2.2.2 Positive impacts	10
2.2.3 Impact of trade on GHG emissions	14
Chapter 3	15
Proposals for Trade Liberalisation	15
3.1 Origins of the proposals for trade liberalisation: the Doha round.....	15
3.1.1 The current state of negotiations	18
3.2 Environmental goods versus climate-friendly goods	22
3.3 Sustainable Energy Trade Agreement	26
Chapter 4	32
GATT Compatibility	32
4.1 the interpretation approach.....	33
4.2 The non-discrimination obligations	35
4.2.1 The Most Favoured Nation rule	36
4.2.2 The National Treatment rule	37
4.2.3 Contravention of the non-discrimination obligations	41
4.3 The Like product analysis.....	42
4.4 Processes and Production Methods.....	48
4.5 The Law of Justification.....	58
4.5.1 Overview of Article XX	58
4.5.2 Case law on Article XX	60
Chapter 5	64
The Way Forward	64
5.1 Amending the GATT rules and waivers	64
5.2 Life Cycle Sustainability Assessment	66
Chapter 6	69
Conclusion	69
Bibliography	70
Primary Sources.....	70
Secondary sources.....	71

Chapter 1

Introduction

Climate change implications have infiltrated all sectors of society and the world can no longer adopt a 'business as usual' attitude. The unprecedented nature of these implications renders it difficult to address in a swift manner the challenges that arise. Anthropogenic GHG emissions are largely responsible for climate change and fossil fuel-based energy uses are considered to be the biggest contributor to these emissions.¹ The need to reduce the rate of these emissions is an uncontested issue.² It has been suggested that one of the options would be to scale up sustainable energy sources through a shift to cleaner and low-carbon transport fuels and technologies.³ This shift to cleaner energy resources could be achieved in numerous different manners; however, this dissertation will consider how a Sustainable Energy Trade Agreement could contribute to this shift as one option amongst among a myriad of other steps that need to be taken to mitigate climate change. This dissertation considers how the liberalisation of trade in CFGs can assist in this shift to cleaner energy resources. As is illustrated the process of liberalising trade in CFGs has been hindered by several issues. A proposal has emerged for a Sustainable Energy Trade Agreement that could render assistance to the issues that arise with the liberalisation of CFGs as well as expedite the liberalisation process. The ultimate question that this dissertation seeks to address is whether a SETA-type agreement entered into by certain WTO Members would be compatible under the GATT.

¹ Wilbanks, T.J. and Sathaye, J. (2003), "Integrating mitigation and adaptation as possible responses to global climate change" *Environment* 45:5, pp. 28-38

² Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organisation" 2009 2.

³ Biermann *Global Climate Governance Beyond 2012: Architecture, Agency and Adaptation* 87.

In order to illustrate the interface between trade and climate change there is a brief consideration of how climate change events have impacted and will impact the trade industry. This is with regards to extreme weather events altering a country's comparative advantage that lead to changes in trade patterns.⁴ These weather events could also disrupt the supply and distribution chains of the trade industry and prove costly, especially to countries that are not prepared for the impacts.⁵ Secondly, there is a consideration of the impact of international trade on climate change, which is explored through two lenses. The negative aspect of the relationship is (that is, how the industry has contributed to the release of emissions through the production as well as distribution phases) is considered first, followed by an evaluation of the positive aspect of the relationship (that is, how the industry can assist in combatting climate change). Although there are several measures, such as technological spill-overs from trade that can be adopted in order to mitigate or adapt to climate change impacts, this dissertation merely considers the contributions that can be made with regards to trade liberalisation of certain goods and services. The trade and environment intersection is clearly multifaceted, which includes the relationship between trade and climate change. This is because an increase in trade causes an increase in emission and is illustrated below climate change events also impact on trade. The main focus of this dissertation is, however, the positive contribution that trade can make in mitigating climate change.

The following chapter considers the proposals that have been made with regards to the liberalisation of trade in CFGs. The origins for such proposals are founded in the Doha round of WTO negotiations that is currently still

⁴ Wilbanks, T.J. and Sathaye, J. (2003), "Integrating mitigation and adaptation as possible responses to global climate change" *Environment* 45:5, pp. 28-38

⁵ Tamioiti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organization" 2009 64.

taking place. It considers at length the reasons for the present deadlock in negotiations as well as what the future holds for these negotiations. The Doha Ministerial Declaration lists 21 subjects that need to be negotiated and agreed upon by all WTO Members. The subject of the relationship between trade and the environment is encompassed in paragraph 31 of the Declaration, which addresses three issues with regards to the relationship. These issues are the relationship between the WTO rules and multilateral environmental agreements (MEAs), the collaboration between the WTO and MEA secretariats and the elimination of tariffs and non-tariff barriers on environmental goods and services.⁶ Although all of these issues are interrelated, this dissertation only considers the issue of the elimination of tariffs and non-tariff barriers on CFGs.⁷ In considering this issue there are two notable problems that arise: firstly, the problem of which products should be subject to trade liberalisation; secondly, the problem of how to liberalise trade in these products. Each of these problems is addressed in a separate chapter.

The problem of which products should be subject to trade liberalisation still remains unresolved. There are broadly two categories of goods and services that have emerged out of the WTO discussions. The first category is the traditional EGs that are produced to address an environmental problem. The second category is CFGs which include products that have certain environmental benefits that arise from their production or use.⁸ In November 2007, in light of the difficulties that arose with regards to the classification of products as either environmental or climate-friendly, the EU and the US

⁶ The Doha Ministerial Declaration at 31 (iii).

⁷ It should be noted that Environmental Goods and Climate-Friendly Goods are two distinct categories of goods. CFGs are regarded as a subset of EGs.

⁸ Claro E, Nicolas L, "Trade in Environmental Goods and Services and Sustainable Development: Domestic Considerations and Strategies for WTO Negotiation" ICTSD Environmental Goods and Services Series, Policy Discussion Paper. Geneva 15.

submitted a joint proposal at the World Trade Organization.⁹ This proposal called for the elimination of trade barriers of goods and services that are directly related to climate change mitigation efforts as part of the Doha round negotiations. The proposal contains a two-tier approach: the first tier relates to 43 products identified by the World Bank report as 'climate-friendly', while the second tier involves the negotiation of an 'Environmental Goods and Services Agreement' that includes a consolidated list of a 153 products regarded as general environmental goods.¹⁰ The developing countries delivered mixed reactions to the EU-US proposal; some noted the importance of climate change and approved of the CFG list, whilst others were concerned with the fact that the proposal failed to mention the potential damage to the domestic industry and the need for technology transfer should trade in these goods be liberalised.¹¹

It is against the backdrop of these negotiations that this dissertation investigates if trade liberalisation of CFGs is compatible under the framework of the GATT. This investigation thus considers which GATT rules are relevant for the proposed liberalisation and what the restrictions imposed by these rules imply. After discussing the restrictions imposed by the GATT, this dissertation considers whether there are ways in which these restrictions can be circumvented through the use of the *like product* analysis, process and production methods and the general exceptions in Article XX of the GATT. Lastly there is an evaluation of any further solutions to the problems that arise under the GATT framework; more specifically whether an amendment of the GATT rules is a plausible option.

⁹ Stilwell *Advancing the environmental goods negotiations: Options and opportunities* 57.

¹⁰ Brewer *The Trade and Climate Change Joint Agenda* 3.

¹¹ Brewer *The Trade and Climate Change Joint Agenda* 4.

Chapter 2

Trade and Climate Change: A multifaceted interface

This chapter discusses the interface between climate change and trade. It briefly outlines how climate change is currently impacting the trade industry; however, the focus is on how the trade industry is relevant to combatting climate change. Firstly, there is a consideration of how the trade industry has in fact negatively contributed to climate change. Secondly, more importantly there is a consideration of how the trade industry is well suited to positively contribute to the efforts being made to combat climate change.

2.1. CLIMATE CHANGE IMPACTS ON INTERNATIONAL TRADE

Often the link between climate change and trade is perceived from one direction, however, the physical impacts of climate change can also affect the pattern and volume of international trade flows.¹² Generally there are two important impacts of climate change on international trade. Firstly, climate change may alter countries' comparative advantages, which would lead to shifts in trade patterns. Countries whose comparative advantages are derived from climatic or geographical circumstances will likely experience a greater impact.¹³ For example, the trade in agricultural merchandise may be negatively impacted by crop reduction if warming trends and extreme weather events continue to increase in the future.¹⁴ Secondly, the vulnerability of the supply, transport and distribution upon which the trade industry depends could be increased due to climate change impacts. Extreme weather events may temporarily close ports or transport routes, and

¹² Wilbanks, T.J. and Sathaye, J. (2003), "Integrating mitigation and adaptation as possible responses to global climate change" *Environment* 45:5, pp. 28-38.

¹³ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 64.

¹⁴ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 64.

coastal infrastructure and distribution facilities are susceptible to flood damage. Such disruptions in the supply chain would evidently raise the costs of undertaking trade.¹⁵

2.2 INTERNATIONAL TRADE IMPACTS ON CLIMATE CHANGE

Whilst the effects of climate change on the trade industry are important to note, the effects of trade on climate change are more germane to the issue this dissertation seeks to address. The expansion of trade may be one reason why it is being regarded as an important consideration in climate change discussions.¹⁶ This relationship is considered through two different lenses. There will firstly be a consideration of how the trade industry has negatively contributed to the current climate change impacts being faced. Secondly there will be a more detailed examination of how the trade industry could assist in combatting climate change impacts. The relationship between international trade and climate change is both positive and negative. The negative aspect of the relationship is examined first, namely how international trade has contributed to the release of emissions. The positive aspect of the trade and climate change relationship (that is, how international trade can assist in combatting climate change and thus reduce emissions) will be considered thereafter.

2.2.1 Negative impacts

It has been suggested that twenty-one per cent of the global carbon dioxide emissions are as a result of international trade.¹⁷ International trade involves countries specialising in the production and export of goods for which they have a comparative advantage and importing goods for which they do not

¹⁵ Wilbanks, T.J. and Sathaye, J. (2003), "Integrating mitigation and adaptation as possible responses to global climate change" *Environment* 45:5, pp. 28-38.

¹⁶ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organization" 2009 49.

¹⁷ Peters, G.P. and Hertwich, E.G. (2008), "CO2 Embodied in International Trade with Implications for Global Climate Policy", *Environmental Science & Technology* 42:5, pp. 1401-1407.

possess such an advantage from their trading partners.¹⁸ This process of exchanging goods from the country of production to the country of consumption requires the use of transportation services, and with the expansion of the trade industry there is a likelihood that this usage will increase.¹⁹ The goods and services that are being traded can be transported by road, air, rail or water. More often than not, trade in goods involves more than one mode of transport; this is because even goods that are transported by air or water often have to make an overland journey to the ultimate consumer.²⁰ These impacts should be noted when considering how the trade industry could contribute to climate change mitigation and adaptation efforts.

2.2.2 Positive impacts

There are several measures that can be adopted to combat climate change. These include measures that would assist in both adapting to current impacts of climate change as well as mitigating future impacts. Mitigation measures refer to options for reducing greenhouse gas emissions and enhancing carbon sinks, whilst adaptation measures are aimed at diminishing the negative impacts of climate change.²¹ Since the primary issue that this dissertation seeks to address is the liberalisation of trade in CFGs, it is relevant to briefly consider the effects that trade liberalisation would have on the environment in general. Trade economists have developed a conceptual framework to examine how trade liberalisation may affect the environment; this was done in order to study the impact of the North American Free Trade Agreement. Considering this framework, it has been concluded that three

¹⁸ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 64.

¹⁹ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organisation" 2009 58.

²⁰ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organisation" 2009 58.

²¹ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 24.

possible effects on the environment could result from trade liberalisation: the scale effect, the composition effect and the technique effect.²²

2.2.2.1 The scale effect

The scale effect refers to the increase in greenhouse gas emissions resulting from an expanded level of economic activity. If there are resources such as labour, land or capital that are not being utilised prior to liberalisation, trade liberalisation will allow for a greater utilisation of these resources and thus lead to an increase in production levels.²³ The increased economic activity will demand a greater energy use, and as many countries still rely on fossil fuels as their main source of energy, the result would thus be an increase in GHG. Moreover, the increase in trade will cause cross-border transportation to be utilised more frequently, which will further increase greenhouse gas emissions.²⁴

2.2.2.2 The composition effect

The composition effect refers to the effect that results when trade liberalisation alters the share that each sector represents in a country's production due to relative price changes, which in turn causes the expansion of some sectors and the reduction of others.²⁵ Whether or not greenhouse gas emissions increase or decrease depends on if emission intensive sectors are expanding or reducing.²⁶ There are two considerations that should be

²² Grossman, G.M. and Krueger, A.B. (1993), "Environmental Impacts of a North American Free Trade Agreement", in Garber, P.M. (ed.), *The US-Mexico Free Trade Agreement*, MIT Press, Cambridge, MA, pp. 13-56.

²³ Antweiler, W., Copeland, B.R. and Taylor, M.S. (2001) "Is Free Trade Good for the Environment?" *American Economic Review* 91:4, pp. 877-908.

²⁴ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organization" 2009 50.

²⁵ Antweiler, W., Copeland, B.R. and Taylor, M.S. (2001) "Is Free Trade Good for the Environment?" *American Economic Review* 91:4, pp. 877-908.

²⁶ Antweiler, W., Copeland, B.R. and Taylor, M.S. (2001) "Is Free Trade Good for the Environment?" *American Economic Review* 91:4, pp. 877-908.

noted with regards to the composition effect. Firstly, as stated above, one of the impacts of climate change is that a country's comparative advantage could be altered. The composition effect illustrates this impact because the increase or decrease of GHG emissions depends on both whether a country's comparative advantage lies within an emission-intensive sector and whether this sector is either being expanded or reduced through trade liberalisation.²⁷

Secondly, the 'pollution-haven hypothesis' should be noted. This hypothesis implies that the composition of production in a trade-liberalising country will also react to the different environmental regulations imposed in other countries.²⁸ Thus, if a country imposes stringent environmental regulations, trade liberalisation may increase competition and lead to emission-intensive sectors relocating to countries that impose weaker regulations.²⁹ The relocation of emission-intensive industries is known as 'carbon leakage'. This term refers to a situation where unilateral measures taken by certain countries to lower their carbon dioxide emissions at a national level do not imply a global reduction of such emissions. This is because industries emitting high levels of carbon dioxide simply relocate to countries that do not adhere to the same strict environmental regulations.³⁰ Therefore, alterations in the composition of a trade-liberalising country's production (whether as a result of the country's comparative advantage or the 'pollution-haven hypothesis') will have an impact on how the production of its trade partners is

²⁷ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 50.

²⁸ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 50.

²⁹ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 49.

³⁰ ³⁰ Antweiler, W., Copeland, B.R. and Taylor, M.S. (2001) "Is Free Trade Good for the Environment?" American Economic Review 91Review91:4, pp. 877-908.

altered.³¹ This would mean that even if trade liberalisation results in a country producing fewer emission-intensive goods, there could still be a demand for such goods (which would then have to be procured elsewhere).

2.2.2.3 The technique effect

This effect refers to the decline of the quantity of emissions released during production as a result of improvements in the methods by which goods and services are produced.³² Firstly, this reduction could occur if open trade increases the availability of CFGs while simultaneously lowering their costs. For importers, access to the technologies used in the production of such goods should reduce the energy required during production, and thus reduce emissions, whilst exporters would be incentivised to develop new goods and services that assist in mitigating climate change because of the prospective market increase.³³ Secondly, this reduction could occur through public demand. If trade liberalisation results in an increase in income levels, the general public would be incentivised to demand lower greenhouse gas emissions. Increased income would provide the public with the freedom to be concerned about other aspects of their well-being, such as a healthier environment.³⁴

³¹ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 51.

³² Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade OrganizationOrganisation" 2009 51.

³³ Grossman, G.M. and Krueger, A.B. (1993), "Environmental Impacts of a North American Free Trade Agreement", in Garber, P.M. (ed.), *The US-Mexico Free Trade Agreement*, MIT Press, Cambridge, MA, pp. 13-56.

³⁴ Grossman, G.M. and Krueger, A.B. (1993), "Environmental Impacts of a North American Free Trade Agreement", in Garber, P.M. (ed.), *The US-Mexico Free Trade Agreement*, MIT Press, Cambridge, MA, pp. 13-56.

2.2.3 Impact of trade on GHG emissions

It is difficult to determine the overall impact of trade liberalisation on GHG emissions because each effect described above could render several different results. The scale and technique effects tend to work in opposite directions and the composition effect depends on other factors (such as a country's comparative advantage and the 'pollution-haven hypothesis'). There have been studies conducted in order to try to assess the effect of trade liberalisation on emissions; this research has included both econometric studies and environmental assessments of trade agreements.³⁵ Studies have suggested that the impact of trade liberalisation on emission levels may differ between developed countries (i.e. OECD members) and developing countries.³⁶ Studies have further suggested that trade liberalisation reduces emissions in OECD countries because the technique effect dominates the scale and composition effects. However, in non-OECD countries the impact on emissions has been found to be largely negative, as the scale and composition effects have prevailed over the technique effect.³⁷ Therefore the emissions in developing countries would not necessarily reduce through trade liberalisation.

³⁵ Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organisation" 2009 53.

³⁶ Managi, S., Hibiki, A. and Tsurumi, T. (2008), "Does Trade Liberalization Reduce Pollution Emissions, Research Institute of Economy, Trade and Industry (RIETI) Discussion Paper Series 08-E-013.

³⁷ Managi, S., Hibiki, A. and Tsurumi, T. (2008), "Does Trade Liberalization Reduce Pollution Emissions, Research Institute of Economy, Trade and Industry (RIETI) Discussion Paper Series 08-E-013.

Chapter 3

Proposals for Trade Liberalisation

This chapter discusses the proposals that have been made for trade liberalisation. The origins of the proposals for trade liberalisation are founded both in the Doha Development round of negotiations as well as the more recent debates surrounding the need for a Sustainable Energy Trade Agreement (SETA). The developments with regards to a SETA are considered as a possible alternative solution to trade liberalisation should the restrictions under the framework of the GATT prove too cumbersome. This chapter discusses the current state of the trade negotiations taking place as part of the Doha round , including an evaluation of the opposing positions of the developed and developing countries. Lastly, there is a consideration of the types of goods and services being proposed for trade liberalisation, to determine whether the proposal is for the trade liberalisation of environmental or climate-friendly goods and to assess the implications that arise as a result of the distinction.

3.1 ORIGINS OF THE PROPOSALS FOR TRADE LIBERALISATION: THE DOHA ROUND

The notion of a global trade regime created in order to ensure fairness in international trade was conceived towards the end of the Second World War.³⁸ The General Agreement on Tariffs and Trade (GATT) was originally adopted in 1947 as the primary international agreement to encourage trade between countries. At the time, industrial products were being produced by

³⁸ Surya P Subedi 'The road from Doha: the issues for the development round of the WTO and the future of international trade' 2003 ICLQ 52 426.

the rich and developed countries; the 1947 GATT was referred to by critics as the 'rich men's club' as it did not purport to regulate trade in products produced by developing countries.³⁹ It was only towards the 1960s and following pressure from developing countries that the GATT began to evolve into a truly international regime and to take into account the concerns and interests of developing countries.⁴⁰ After seven years of negotiations, the Trade Negotiations Committee of the Uruguay round adopted by consensus a Final Act in December of 1993.⁴¹ This Final Act includes the agreement establishing the World Trade Organization (WTO), which is a permanent organisation with a membership of 160 states as of 26 June 2014.⁴² There were also several annexed agreements to the Act, including the General Agreement on Tariffs and Trade 1994 as well as the Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIP). These annexed agreements were opened for signature in Marrakesh in 1994 and entered into force in 1995.⁴³ The GATT remains the central substantive agreement under the WTO and is designed to encourage trade between WTO members by reducing tariffs and preventing trade barriers.⁴⁴ One of the main objectives of the GATT is to reduce the economic measures that prohibit or restrict access to markets of products and services imported from other members. This objective is largely achieved through the provisions set out in Articles I, II, III, XI and XX of the GATT.⁴⁵ The proposals to liberalise trade in CFGs will

³⁹ Surya P Subedi 'The road from Doha: the issues for the development round of the WTO and the future of international trade' 2003 ICLQ 52 426.

⁴⁰ Surya P Subedi 'The road from Doha: the issues for the development round of the WTO and the future of international trade' 2003 ICLQ 52 426.

⁴¹ Sands P and Peel J *Principles of International Environmental Law* 3ed 808.

⁴² Membership information as accessed http://www.wto.org/english/thewto_e/whatis_e/tif_e/org6_e.htm.

⁴³ Sands P and Peel J *Principles of International Environmental Law* 3ed 808.

⁴⁴ Sands *Principles of International Environmental Law* 809.

⁴⁵ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 8.

likely impact these Articles and thus the content and extent of these Articles will be examined through a consideration of the relevant GATT case law and the differing views of commentators.

Although the WTO does not have express environmental objectives, its preamble does acknowledge that the world's resources must be utilised in an optimal manner in accordance with the principle of sustainable development.⁴⁶ Thus the preamble takes note of the importance of preserving the environment from the outset and the relationship between international trade and the environment should be regarded as being mutually beneficial. The WTO has several responsibilities, amongst which is the responsibility to provide a forum for negotiations among Members.⁴⁷ For the purposes of this dissertation, only the last round of negotiations (namely the Doha round of negotiations, which took place at the fourth Ministerial Conference) is evaluated. Both a broad overview and the current state of the negotiations are presented.

The history and contents of the Doha round of negotiations are briefly considered, as is the specific subject of the relationship between trade and the environment as encompassed in the Doha Development Agenda.⁴⁸ The Doha conference did not adopt any new treaty or protocol to add to the network of WTO agreements; however, a work programme in the form of two declarations was approved. These declarations amounted to the Doha conference agreeing on the nature and scope of the next round of trade negotiations, which is referred to as the 'Development Round'.⁴⁹ Developing

⁴⁶ The preamble of the Marrakesh Agreement establishing the World Trade Organization.

⁴⁷ The Marrakesh Agreement establishing the World Trade Organization at Article III.

⁴⁸ Andrew Charlton and Joseph Stiglitz 'A development-friendly prioritisation of Doha Round proposals' 2005 Blackwell Publishing Ltd 293.

⁴⁹ Surya P Subedi 'The road from Doha: the issues for the development round of the WTO and the future of international trade' 2003 ICLQ 52 425.

countries were concerned and argued that until implementation of the agreements that were concluded in the last round was effective, no new round should be started. These countries were further concerned that trade negotiations simply moving on to a new round might signify a shift away from the development-orientated focus of the agenda.⁵⁰ Moreover the negotiations under the Doha round have been described as adopting a ‘single-undertaking’ approach, meaning that the 21 subjects listed in the Agenda form a single package to be signed by each state without the option to pick and choose between different subjects. It has been put forth that the ‘single-undertaking’ approach is neither a binding legal principle of the WTO nor a tool that should be utilised to shape the progress of negotiations.⁵¹ The following section considers the content of the trade and environment subject listed in the Doha Declaration as well as the reasons for the current deadlock in the negotiations.

3.1.1 The current state of negotiations

This section considers the current state of negotiations under the Doha round and the reasons as to why the round is still on going. The reasons for the standstill in this round of negotiations are firstly considered in a general manner with regards to all of the subjects of the Doha Declaration. Thereafter there is a consideration of the specific issues that have arisen with regards to the subject of trade and environment.

3.1.1.1 The deadlock in negotiations

The Uruguay round of negotiations achieved a significant degree of trade liberalisation, which included contributions from developed as well as developing countries. Although the round was largely regarded as

⁵⁰ Surya P Subedi ‘The road from Doha: the issues for the development round of the WTO and the future of international trade’ 2003 ICLQ 52 425.

⁵¹ Mendoza M R ‘Toward plurilateral plus agreements’ in *The future and the WTO: Confronting the challenges* (2012) ICTSD Programme on Global Economic Policy and Institutions 102.

successful, it created consequences for the following round. Firstly, the developing countries expected a form of compensatory treatment in the next round (i.e. the Doha round) because of the fact that they had accepted the whole package of obligations during the Uruguay round and had taken on several new commitments as a result of the single-undertaking approach and previously excluded subjects were brought under the purview of the WTO.⁵² Secondly, the developed countries were not satisfied going into the Doha round because the liberalisation of manufactured products by the developing countries in the Uruguay round meant that marginal benefits from further tariff cuts were respectively lower.⁵³ Thirdly, developed countries also substantially reduced barriers to their own markets; they had not, however, engaged in the reforms on agriculture and textiles. Developing countries, especially India and Brazil, were evidently disappointed because they had expected the negotiations to focus on agriculture, which led to the present deadlock in the negotiations.⁵⁴ There have also been reservations on the part of policy makers in the United States and Europe who are sceptical about further liberalisation of their markets in light of the rapid rise of exports in China.⁵⁵ Lastly, the concept of a 'single-undertaking' approach that was adopted in the Uruguay round and the consequent Doha round has further strained the process. It seems inconceivable that countries that are at different levels of development and possess conflicting interests would be able to agree on all of the issues being considered during the negotiation

⁵² Ancharaz V 'Can the Doha round be saved' in *The future and the WTO: Confronting the challenges* (2012) ICTSD Programme on Global Economic Policy and Institutions 103.

⁵³ Cline, W.R. "Doha Can Achieve Much More than Skeptics Expect," *Finance and Development*. (March 2005): 22-23.

⁵⁴ Ancharaz V 'Can the Doha round be saved' in *The future and the WTO: Confronting the challenges* (2012) ICTSD Programme on Global Economic Policy and Institutions 103.

⁵⁵ Ancharaz V 'Can the Doha round be saved' in *The future and the WTO: Confronting the challenges* (2012) ICTSD Programme on Global Economic Policy and Institutions 105.

process, which is why the approach should be abandoned.⁵⁶ In light of the above, it is clear that there are numerous obstacles that hinder the Member's ability to reach an agreement. The slow progress being made at the Doha round has incentivised the consideration of a SETA-type agreement (outside the framework of the GATT), that is aimed at addressing the interface between trade and climate change.

3.1.1.2 The subject of trade and environment

As stated above, there are several reasons for the current deadlock in the negotiations and there seems little hope of the Members ever achieving consensus on all of the issues that form part of the negotiations. Although the future success of the Doha round seems unlikely, the trade and environment subject put forth in the Declaration should be considered as it establishes the context for the consideration of trade liberalisation in climate-friendly goods. The Doha Ministerial Declaration (DMD) acknowledges that there is a need to enhance the mutual supportiveness of trade and the environment and agree to negotiations on the reduction or as appropriate the elimination of tariff and non-tariff barriers to environmental goods and services. It further instructs the Committee on Trade and Environment⁵⁷ in pursuing work on all items on its agenda to give particular attention to the effect of environmental measures on market access (especially in relation to developing countries, with an emphasis on the least-developed among them) and to those situations in which the elimination or reduction of trade restrictions and distortions would benefit trade, the environment and development.⁵⁸ Since the focus of this dissertation is the liberalisation of trade in CFGs, it

⁵⁶ Ancharaz V 'Can the Doha round be saved' in *The future and the WTO: Confronting the challenges* (2012) ICTSD Programme on Global Economic Policy and Institutions 103.

⁵⁷ The Committee on Trade and Environment is a forum that initiates dialogue between governments on the impact of trade policies on the environment and vice versa.
http://www.wto.org/english/tratop_e/envir_e/envir_e.htm (accessed 16.11.2014)

⁵⁸ The Doha Ministerial Declaration WT/MIN(01)/DEC/1 at 31-33.

would be useful to briefly note the content of the trade and environment subject of the Doha Agenda.

The negotiations on trade and environment can be divided into three primary themes namely: the relationship between the WTO rules and multilateral environmental agreements (MEAs); the collaboration between the WTO and MEA secretariats and the elimination of tariffs and non-tariff barriers on environmental goods and services.⁵⁹ The DMD states that negotiations on trade liberalisation in EGs should enhance the mutual supportiveness of trade and the environment and result in beneficial outcomes for both.⁶⁰

Although the three themes are interrelated, for the purposes of this dissertation it will be necessary to consider the proposal to eliminate or reduce tariff and non-tariff barriers to trade in EGS. The elimination or reduction of trade barriers would not only benefit the environment by improving countries' access to high quality environmental goods; it would also facilitate easier access to environmental technologies at lower costs.⁶¹ Members of the WTO are in the process of identifying environmental goods of interest to them following the Work Programme of July 2008. Tariff and non-tariff barriers that restrict the trade of goods and services that are directly relevant to climate change mitigation or adaptation measures have been noted on the negotiating agendas of multilateral, bilateral and regional trade agreements.⁶²

⁵⁹ The Doha Ministerial Declaration at 31 (iii).

⁶⁰ The Doha Ministerial Declaration at 31 (iii).

⁶¹ Carpentier C L "Environmental Goods and Services in the World Trade Organization" 2005 *The Journal of Environment and Development* 225.

⁶² Brewer, T.L "The technology agenda for international climate change policy: A taxonomy for structuring analyses and negotiations" in *Background paper for European Climate Platform seminar on 'Strategic aspects of technology for the UNFCCC and climate change debate: The Post-Bali technology agenda'* 8.

It is only recently that as a result of developments especially in the US and the WTO there is an active interest in not only identifying such goods and services, but also including them on trade negotiating agenda. In 2006 the European Commissioner for Trade, Peter Mandelson, made a proposal along these lines, but he did not specify which goods and services should be included. Then in November 2007, the US government together with the EU declared essentially the same proposal but made reference to a list of goods.⁶³ There are two issues that arise with the consideration of liberalisation in CFGs. The first is the issue of product coverage, which refers to which products should be subject to trade liberalisation. The second is the issue of modality, which is how to liberalise trade in these products which has created another stumbling block to the progress in the Doha round.⁶⁴

3.2 ENVIRONMENTAL GOODS VERSUS CLIMATE-FRIENDLY GOODS

This section considers the differences between environmental goods (EGs) or climate-friendly goods (CFGs). CFGs are a subset of EGs and are the focus of this dissertation. The contradicting positions of the developed and developing countries have caused delays in the negotiation process and reference is made to these positions.⁶⁵

Negotiations with regards to EG liberalisation have barely progressed since Doha, because any progress in the EG agenda depends on progress in the other identified subjects of the Doha agenda and the trade and environment

⁶³ Brewer, T.L "The technology agenda for international climate change policy: A taxonomy for structuring analyses and negotiations" in *Background paper for European Climate Platform seminar on 'Strategic aspects of technology for the UNFCCC and climate change debate: The Post-Bali technology agenda'* 8.

⁶⁴ Claro E, Nicolas L, "Trade in Environmental Goods and Services and Sustainable Development: Domestic Considerations and Strategies for WTO Negotiation" ICTSD Environmental Goods and Services Series, Policy Discussion Paper. Geneva 13.

⁶⁵ Charlton A, Stiglitz J 'A development-friendly prioritisation of Doha Round proposals' 2005 Blackwell Publishing Ltd 295.

agenda of the WTO has been regarded as a lower priority.⁶⁶ The lack of a globally accepted definition of EGs has further delayed the negotiation process concerning which products to liberalise.⁶⁷ It is generally accepted that two broad categories of goods and services have emerged out of the WTO discussions: traditional EGs (which have the main purpose of addressing an environmental problem) and CFGs (which include products that have certain environmental benefits arising from their production or use). An additional complexity arises from the fact that CFGs can either be climate friendly due to improvements in embedded technology or as compared to a different product.⁶⁸ The uncertainty about the definition and classification of the proposed goods creates the impression that there are potential gains for both developed and developing countries. The developed countries are seeking beneficial propositions in terms of market access, whilst the developing countries focus on access to EGs.⁶⁹ The dual-use problem is a challenge that further complicates the negotiation process. Many of the EGs proposed for rapid liberalisation by WTO Members are products that also have a non-environmental use. Developing countries are hesitant to liberalise trade in these goods with a dual-use because of concerns that doing so would have an impact on these countries' established national industries.⁷⁰ However, those advocating for the liberalisation of these products argue that

⁶⁶ Carpentier C L "Environmental Goods and Services in the World Trade Organization" 2005 *The Journal of Environment and Development* 234.

⁶⁷ Claro E, Nicolas L, "Trade in Environmental Goods and Services and Sustainable Development: Domestic Considerations and Strategies for WTO Negotiation" ICTSD Environmental Goods and Services Series, Policy Discussion Paper. Geneva 13.

⁶⁸ Claro E, Nicolas L, "Trade in Environmental Goods and Services and Sustainable Development: Domestic Considerations and Strategies for WTO Negotiation" ICTSD Environmental Goods and Services Series, Policy Discussion Paper. Geneva 15.

⁶⁹ Vikjlyev A "Environmental Goods and Services: defining negotiations or negotiating definitions?" in *Trade and Environment Review* 2003 33.

⁷⁰ Claro E, Nicolas L, "Trade in Environmental Goods and Services and Sustainable Development: Domestic Considerations and Strategies for WTO Negotiation" ICTSD Environmental Goods and Services Series, Policy Discussion Paper. Geneva 17.

the environmental benefits would be limited if liberalisation is limited to a smaller group of products used solely for environmental purposes.⁷¹ The issues described above further complicate the task of classifying which goods should be subject to trade liberalisation and which should be excluded. Adding to the delays experienced in the current Doha round, it is not surprising that no consensus has been reached on which environmental goods should be liberalised. The EU-US proposal put forth in 2007 represents a step in the right direction and is the next consideration.

As a result of the difficulties that arise with the classification of which goods to liberalise and the increasingly pressing need to address climate change impacts, the EU and the US submitted a joint proposal at the WTO calling for accelerated trade liberalisation on a list of 43 environmental products.⁷² The structure of the proposal set out a two-tier approach to the liberalisation of environmental goods and services. The first tier encompassed goods and services that were directly related to climate change mitigation, whilst the second tier encompassed a broader range of general environmental goods and services.⁷³ The first tier consisted of the list of 43 products identified as 'climate-friendly' by the World Bank either because they directly address climate change mitigation efforts or they possess a clear environmental benefit. The wording used could indicate that there is some leeway for an argument to be made by those opposing the proposal that the EU and the US are trying to include those products considered to possess a dual-use.⁷⁴

⁷¹ Claro E, Nicolas L, "Trade in Environmental Goods and Services and Sustainable Development: Domestic Considerations and Strategies for WTO Negotiation" ICTSD Environmental Goods and Services Series, Policy Discussion Paper. Geneva 18.

⁷² Brewer, T.L "The technology agenda for international climate change policy: A taxonomy for structuring analyses and negotiations" in *Background paper for European Climate Platform seminar on 'Strategic aspects of technology for the UNFCCC and climate change debate: The Post-Bali technology agenda'* 4.

⁷³ Stilwell *Advancing the environmental goods negotiations: Options and opportunities* 63.

⁷⁴ Brewer 2008 *Background paper for European Climate Platform seminar on 'Strategic aspects of technology for the UNFCCC and climate change debate: The Post-Bali technology agenda'* 5.

The second tier of the proposal focuses on the liberalisation of a consolidated list of 153 products that are considered to be EGs. This list was compiled by the 'friends of environmental goods', a group of largely developed countries that have been advocating for Members to approve a list of products for accelerated liberalisation.⁷⁵ As the focus of this dissertation is the liberalisation of climate-friendly goods, however, the focus is on the first tier products included in the EU-US proposal and the subsequent progress.

The developing countries, more specifically India and Brazil, reacted with hostility, which resulted in an impasse on this proposal. Brazil raised concerns with regards to the omission of biofuels from the list, especially since exports of ethanol from Brazil to the US are subject to highly restrictive tariffs.⁷⁶ It has been argued that although the EU-US proposal is a step in the right direction, the list could be improved. Firstly, tariffs on biofuels could be added to the list as well as perhaps tariffs on manufactured goods related to biofuels. Secondly, the negotiating agenda could be further expanded to include non-tariff barriers, trade in services and foreign direct investment barriers.⁷⁷ Further criticisms against the proposal were that adopting the 'one-size-fits-all' approach was not appropriate in the context as it appeared that the objective of the proposal was market opening and not really environmental protection.⁷⁸ It would seem at first glance that the proposal made by the EU and the US is a welcome shift towards the liberalisation of not only environmental goods and services, but climate-friendly goods as well; however, the criticisms raised indicate that several challenges still persist.

⁷⁵ Stilwell *Advancing the environmental goods negotiations: Options and opportunities* 63.

⁷⁶ Brewer 2008 *Background paper for European Climate Platform seminar on 'Strategic aspects of technology for the UNFCCC and climate change debate: The Post-Bali technology agenda'* 5.

⁷⁷ Brewer 2008 *Background paper for European Climate Platform seminar on 'Strategic aspects of technology for the UNFCCC and climate change debate: The Post-Bali technology agenda'* 7.

⁷⁸ Stilwell *Advancing the environmental goods negotiations: Options and opportunities* 65.

The following chapter explores the possibility of liberalising CFGs under the framework of the GATT, highlighting the problems that arise with the restrictions that are encompassed in the GATT framework. Thereafter is a consideration of how the restrictions discussed in the previous chapter can be accommodated either under the GATT or possibly another framework.

3.3 SUSTAINABLE ENERGY TRADE AGREEMENT

The transition to a low-carbon economy will require the replacement of fossil fuel-based energy sources by sustainable sources. It will also require the utilisation of energy efficiency measures in terms of conventional power generation and end-use sectors (such as transport and buildings) as well as the deployment of cleaner transport fuels and technologies.⁷⁹ Recently there has been increased investment in renewable energy; in 2008 and 2009, renewable energy investments constituted more than half of the investments in new energy generation.⁸⁰ Moreover, the deployment of sustainable energy sources and technologies would not only assist in mitigating the effects of climate change, but a number of studies have also highlighted the potential for increases in employment in the sustainable energy sector (as opposed to the fossil fuel sector).⁸¹ It should be noted that sustainable energy refers to solar, small-scale hydro, wind, biomass-related fuels, technologies and services. This category could be even further expanded by including any energy source that has the potential to mitigate GHG emissions.⁸²

⁷⁹ Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

⁸⁰ United Nations Environment Programme and Bloomberg New Energy Finance "Analysis of Trends and Issues in the Financing of Renewable Energy" 2010 34.

⁸¹ Kammen "Putting Renewables to Work: How many jobs can the clean energy industry generate?" in *Renewable and Appropriate Energy Laboratory Report* (2004) 12.

⁸² Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

Deployment of sustainable energy products and services has been slow due to the higher prices in comparison to conventional fossil fuel energy. This difference in costs is largely due to the fact that there is still no proper mechanism by which to price carbon or to quantify the negative environmental impacts related to fossil fuel use. Moreover, there is a substantial burden placed on the sustainable energy sector by government subsidies for fossil fuels.⁸³ Manufacturing systems operate through a network of supply chains that allows companies to optimise production costs by sourcing components from different locations depending on the efficiency of their production. Evidently trade policies that hinder supply chain optimisation increase the costs of the components as well as of the goods themselves.⁸⁴ The increased costs provide little economic incentive for countries to produce, distribute or procure CFGs. Currently there are several big emitter countries that are at the same time the major traders in CFGs. It has been put forth that these countries (which have the greatest stake in addressing climate change through sustainable energy deployment) could also benefit by ensuring stability and predictability of trade flows in CFGs.⁸⁵

As mentioned above, the Doha round of negotiations on environmental goods, including those relevant to sustainable energy, has been at a standstill because of the inability of Members to reach consensus on either of the issues that are part of the negotiations. More specifically, the differing views on scope, coverage and modalities of liberalisation have further frustrated the negotiation process. There is thus a pressing need to address the issue of trade liberalisation in CFGs through a means outside the Doha round of negotiations. Proposals have emerged for an agreement whereby a

⁸³ Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

⁸⁴ Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

⁸⁵ Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

subset of countries would aim to lower trade barriers in CFGs amongst themselves; amongst these proposals is the Sustainable Energy Trade Agreement. The purpose and content of such an agreement is considered as well as the compatibility of such an agreement under the GATT framework is examined, with a specific focus on which GATT obligations would arise and how the parties to such an agreement should meet these obligations.

The aim of a SETA-type agreement, (in which willing WTO Members agree to liberalise trade in CFGs amongst themselves) is to support the development of a global supply of sustainable energy and to assist in mitigating the effects of climate change through reducing trade barriers.⁸⁶ Concluding such an agreement would be beneficial for several reasons, but two pressing matters would be addressed in particular. Firstly, a SETA would assist in moving the liberalisation of trade in CFGs forward despite the deadlock of the Doha round. Secondly, the current global regulation of energy is quite fragmented (especially in the clean energy sector), with a growing number of trade disputes between countries; a SETA would assist in streamlining the sector.⁸⁷ During negotiations the WTO has utilised a single-undertaking approach, which is a negotiating technique that does not allow the parties to move forward in the negotiation process unless there is consensus on the current issue being negotiated. Put simply, this approach results in no agreement on any issue unless there is agreement on all issues, which as illustrated above has contributed to the current Doha impasse.⁸⁸ Nevertheless, despite the WTO's adoption of this negotiation technique, it is

⁸⁶ Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

⁸⁷ Lewis J, "Emerging Conflicts in Renewable Energy Policy and International Trade Law" (2012) Working paper prepared for the Centre for Resource Solutions and the Energy Foundation China Sustainable Energy Program.

⁸⁸ Wolfe R "The WTO Single Undertaking as Negotiating Technique and Constitutive Metaphor" 2009 *Journal of International Economic Law* 835-585.

still possible to adopt new additional agreements or to conclude agreements outside of the framework.⁸⁹

The SETA would not be the first agreement to be concluded since the Doha deadlock; indeed, there have been a few preferential and free trade agreements concluded between WTO Members as well.⁹⁰ The utilisation of an agreement concluded outside the WTO provides WTO Members with the opportunity to address contentious issues that have caused delays in the WTO development rounds.⁹¹ A SETA would approach the issues of climate change in a novel manner whilst at the same time maintaining open markets.⁹² There are complexities that arise with concluding an agreement outside the WTO, however, this dissertation is based on the premise that some WTO Members decided to adopt such a course of action. Therefore the complexities of concluding such an agreement will not be considered.

The countries wishing to conclude a SETA-type agreement have leeway with regards to creating a form and structure that would effectively consider climate change as well as market barrier issues. There are three possible structures that the SETA-type agreement could adopt. Firstly, it could be structured as a stand-alone plurilateral agreement, similar to the Government Procurement Agreement at the WTO.⁹³ Secondly, it could be structured like the Information Technology Act and extend concessions to all WTO Members based on the Most Favoured Nation rule on the condition that the

⁸⁹ Wolfe R "The WTO Single Undertaking as Negotiating Technique and Constitutive Metaphor" 2009 *Journal of International Economic Law* 835-585.

⁹⁰ Hartman S W "The WTO, the Doha Round Impasse, PTAs and FTAs/RTAs" 2013 (27) *International Trade Journal* 411-430.

⁹¹ Collier P "Why the WTO is Deadlocked and What Can Be Done About It" 2005 *Department of Economics Oxford University* 5.

⁹² Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

⁹³ Kennedy M, "Legal options for a Sustainable Energy Trade Agreement" 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

concessions are only made on the accession of a large majority of the Members based on trade, energy or climate change related criteria.⁹⁴ Lastly, it could be structured as a stand-alone plurilateral agreement outside of the WTO framework. Membership would thus be open to WTO and non-WTO Members.⁹⁵

Although the SETA-type agreement does represent a positive step towards liberalising trade in a wide array of CFGs, it also presents some problems. One is the problem of ‘free-riders’, which refers to non-SETA Members deriving benefits from the SETA-type agreement on the basis of the Most Favoured Nation rule entrenched in Article I of the GATT.⁹⁶ It has been suggested that in order to avoid the problem of ‘free-riders’, Members should obtain a waiver under the relevant Marrakesh Agreement for a plurilateral agreement.⁹⁷ Although in principle waivers would prevent ‘free-riders’ from occurring, the use of a waiver to circumvent obligations in Part I of the GATT is problematic. The differing opinions with regards to the power to waive certain GATT obligations are considered in the following chapter. A SETA would not only increase opportunities in the global market of the energy sector, but it would also hugely contribute to climate mitigation efforts. Furthermore, such an agreement could inform future WTO negotiations and perhaps even assist countries in reaching consensus in the current Doha round. It is thus necessary to consider the future possibilities of such an

⁹⁴ Weber R H “Digital trade in WTO law- taking stock and looking ahead” 2010 *Asian Journal of WTO and International Health Law and Policy* 5.

⁹⁵ Kennedy M, “Legal options for a Sustainable Energy Trade Agreement” 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

⁹⁶ Brown C P “Participation in WTO dispute settlement: Complaints, interested parties and free riders” 2005 *The World Bank Economic Review* 287-310.

⁹⁷ Kennedy M, “Legal options for a Sustainable Energy Trade Agreement” 2011 *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy* 2-15.

agreement being regarded as legitimate in terms of WTO law and more specifically within the framework of the GATT. The following chapter considers the GATT implications should a subset of countries decide to enter into a SETA-type agreement and the specific obligations that would arise vis-à-vis other WTO Members.

Chapter 4

GATT Compatibility

This chapter investigates the compatibility of the above proposals under the GATT framework. Consideration is given as to which GATT rules may be implicated if trade in CFGs is liberalised, including an examination of the content of these rules and how they have been interpreted in past case law.

Although it is likely that several GATT rules might be impacted by the trade liberalisation proposals, only two are considered in detail.⁹⁸ The two most likely GATT rules to be contravened by the above proposals are those that entrench the rules of non-discrimination relating to international economic behaviour.⁹⁹ First is the rule of the 'Most-Favoured Nation' (MFN) treatment, which requires state A to give equal treatment to trade transactions originating in, or destined for, other countries entitled to the benefit of the norm.¹⁰⁰ Second is the non-discrimination rule of 'National Treatment' (NT), which requires that a state treat within its own border goods originating from outside its borders in the same manner that it treats 'like products' that are of domestic origin.¹⁰¹ In evaluating the scope and content of the MFN and NT norms, this chapter more specifically analyses the relationship between these norms and the status of WTO law regarding *like products*. This analysis occurs in two stages: firstly, determining if CFGs and other similar goods that do not have the same effect in mitigating climate change can be

⁹⁸ Amongst the rules that may be implicated is Article XXV that governs joint action by Contracting Parties.

⁹⁹ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 61.

¹⁰⁰ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 57.

¹⁰¹ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 57.

considered *like products*; secondly, if products that have similar end uses but were manufactured by different processes can be regarded as *like products*. Thereafter there is a consideration of whether the contravention of the GATT rules could be justified in terms of the exceptions provided in Article XX of the GATT. In terms of trade liberalisation in CFGs, Articles XX (b) and (g) are considered. All of the exceptions listed in Article XX are qualified by that Article's chapeau, which requires Members who purport that the measure being utilised falls within Article XX to be able to show that the measure is 'not being applied in a manner that would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade'.¹⁰² The case law interpreting Article XX both under the old and new GATT systems is considered in order to determine the likelihood of the contraventions being justified as exceptions.

4.1 THE INTERPRETATION APPROACH

The history of the GATT and the purpose for which it was established has already been briefly; it is, however, necessary to note the interpretation approach that has been adopted under the old and new GATT. This is because doing so sheds light on the difficulties that arise when trade and social values, more specifically environmental values, are considered simultaneously.

The tariff-orientated structure has led to a pro-trade bias being built into the current GATT framework. As a result, non-trade issues such as human health, social concerns and environmental protection have been treated as exceptions to the general obligations and are thus only examined after the

¹⁰² The GATT at Article XX.

general obligations have been violated, not from the outset.¹⁰³ The pro-trade bias that stems from the separation between general obligations and exceptions was emphasised through the interpretive practice of the GATT panels. The exceptions were interpreted in a narrow manner and were subject to strict tests such as the 'least trade-restrictive means' test under the old GATT dispute settlement system.¹⁰⁴ The interpretive attention of these panels was product-orientated and this approach tended to deflect attention away from the measures adopted to protect non-trade issues. However, if GATT panels had developed a jurisprudence that was secured by measures and not products, then domestic regulations could potentially have been regarded as non-discriminatory at the initial stage before proceeding to the exception clause for justification.¹⁰⁵

This pro-trade bias has been mitigated in a sense through a change in the interpretive approach adopted by the Appellate Body (AB). The AB has directed its focus on the manner in which the domestic regulation is adopted or applied, not the regulation itself.¹⁰⁶ The importance of the chapeau to Article XX has been emphasised, with the result being that the Members' regulatory autonomy has been safeguarded. Therefore even if a regulation were determined to be a violation, the outcome may be merely suspended until the manner in which the regulation is applied is altered.¹⁰⁷ Nonetheless, even with this alteration in the approach of the AB, the distinction between

¹⁰³ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 2.

¹⁰⁴ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 2.

¹⁰⁵ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 3.

¹⁰⁶ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 4.

¹⁰⁷ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 5.

the general obligations and the exceptions are still prevalent as a result of the textual structure of the GATT. This lingering pro-trade bias has been addressed in a more direct manner in other trade agreements such as the SPS (Sanitary and Phytosanitary) and TBT (Technical Barriers to Trade) agreements.¹⁰⁸ The scope of this dissertation does not allow for a consideration of these agreements; however, since the liberalisation of trade in CFGs is being examined under the GATT framework it is necessary to acknowledge that this distinction is still prevalent and consider how it still influences the interpretation of the GATT rules. In determining whether a SETA-type agreement would be compatible within the GATT framework, it is necessary to determine if the agreement would be consistent with the non-discrimination obligations under the GATT. If it is determined that the agreement would contravene these obligations, consideration needs to be given as to whether it would be permissible nonetheless under one of the exceptions provided for under Article XX of the GATT.

4.2 THE NON-DISCRIMINATION OBLIGATIONS

The rest of this chapter is devoted to considering how the MFN and NT rules of the GATT might be contravened by the proposals for trade liberalisation in CFGs. One of the central pillars of the global trade system is that trade should proceed with the least possible amount of discrimination among countries, in order to facilitate trade and reduce tensions.¹⁰⁹ The MFN rule embedded in Article I is considered first, and thereafter the NT rule found in Article III. The content of each rule is set out, along with how the rule has been interpreted in past case law. As both of these obligations require non-discrimination of *like products*, the crux of the issue is thus the *like product*

¹⁰⁸ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 5.

¹⁰⁹ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 101.

analysis. This analysis first evaluates how the WTO law is structured presently and the case law that sets out the approach to adopt when determining if products are alike. Thereafter there is an examination of the emerging approach to incorporate the Process and Production Methods (PPMs) into the *like product* analysis and how this incorporation influences the process of determining which products are alike when they have similar end-uses yet their production has different impacts on the environment.

4.2.1 The Most Favoured Nation rule

In the past MFN clauses were incorporated into bilateral treaties as a shorthand means of ‘incorporating by reference’ benefits that had been granted in other agreements. In several cases states used a conditional MFN clause through which concessions granted to one state are granted to another on an MFN basis, however only if that other state grants compensatory or reciprocal concessions.¹¹⁰ There are several non-discrimination clauses in the GATT; however, the most important MFN clause is the one that is entrenched in Article I.¹¹¹ In simple terms, this clause requires that any concession granted by a contracting party to a product of another state ‘shall be accorded immediately and unconditionally to the *like product* originating in or destined for the territories of all other contracting parties’.¹¹² For example, should a subset of countries decide amongst themselves to lower trade barriers in CFGs through effectively a multilateral SETA-type agreement, then these lowered trade barriers would have to apply to all CFGs originating in the territory of any WTO member. It is at this stage that the *like product* analysis is important, because if goods can be distinguished on the basis that they are not CFGs then a range of goods would not be subject to the

¹¹⁰ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 58.

¹¹¹ The GATT at Article 1, the GATS at Article 2 and the TRIPS at Article 4.

¹¹² The GATT at Article I (1).

advantages of trade liberalisation. The MFN obligation under the GATT is regarded as broad and unconditional.¹¹³ The issue that arises with the adoption of a broad interpretation of the MFN rule is that it is thus likely that in most cases the WTO would conclude that the MFN rule has been contravened.

With regards to the liberalisation of trade in CFGs, the above issue is more nuanced. If the good in question is presumably a CFG, then the Members of the SETA-type agreement would not raise any objections to extending the same zero-tariff rating. The issue is whether a state can claim the same tariff for a good that appears to be a CFG but which in actual fact is not. This issue is clarified through a consideration of the following example. A state that is not part of the group of states that has decided to lower their tariffs for certain CFGs (which would include double-glazed windows) wants to sell single-glazed windows to a state that is a member of the group; is the selling state entitled to the same lower tariff? The selling state could argue that it should be entitled to the same benefit on the basis that windows are windows and thus are *like products*. This example illustrates not only the importance but also the difficulty in distinguishing between products that are CFGs and products that can be regarded as similar to CFGs.

4.2.2 The National Treatment rule

The second non-discrimination rule that might be implicated is the rule of National Treatment found in Article III of the GATT.¹¹⁴ This rule specifies that products imported from a contracting party into the territory of another contracting party shall be accorded no less favourable treatment than that accorded to *like products of national origin* in respect of all laws and requirements affecting the products their internal sale, purchase, distribution

¹¹³ Matsushita M "The World Trade Organization: Law, practice and policy" 2003 at 147.

¹¹⁴ The NT rule is also embodied in the GATS at Article 17 and the TRIPS at Article 3.

or use.¹¹⁵ Although the rationale behind Article III has altered throughout the jurisprudential history of the GATT, the viewpoint that is more in line with free trade concerns states that Article III should be applied not only to protectionist measures, but also to measures that are not technically protectionist yet still discriminatory.¹¹⁶ There are two issues that arise with regards to the content and interpretation of the NT rule. The first is whether the requirement of 'so as not to afford protection to domestic production' found in Article III (1) should be read with the requirements of Article III (4). The second issue is what the requirement of 'no less favourable treatment' in Article III (4) entails. In order to clarify the possible implication of the NT rule, it is relevant to once again utilise the example of double-glazed versus single-glazed windows. Should a state that is part of the group of states that decided to lower tariffs for CFGs decide to import products from a state not a part of that group, then it would have to afford the selling state the same tariff benefits if it is concluded that the products are 'like products'. Thus the state importing the product would need to afford the selling state the same benefits it affords to its domestic products.

The case law interpreting the obligations that arise in terms of the NT rule should be briefly considered as it sheds light on how the *like product* analysis is approached. In order to contextualise the above it is necessary first to discuss how the *like product* issue arises in terms of the NT rule. For example, should a contracting party decide to subject CFGs to lower tariffs, then by virtue of the NT rule it would have to afford the same tariff benefits to the *like products* imported from another contracting party. The *like product* analysis thus becomes an important factor as it will determine the scope and content of the products that will be subject to the lower tariffs. As is illustrated below, the *like product* analysis has proven to be artificial at times which has

¹¹⁵ The GATT at Article III (4).

¹¹⁶ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 20.

resulted in widening the scope of products that fall within the ambit of CFGs. The problem that arises with widening the scope of CFGs is that a range of products could fall within the scope when they are in actual fact harmful to the climate instead of climate-friendly. These products could pose a threat to the climate either through their end-uses or through their production methods. There are different approaches to the *like product* analysis that could be adopted in order to preclude products that are not truly CFGs from receiving the same tariff benefits as those that are. These approaches are considered in detail below.

According to the protectionist viewpoint, a Member's regulatory intentions (whether protectionist or not) should be considered even during the *like product* analysis.¹¹⁷ This interpretation approach, which prevailed in early GATT panel decisions, was known as the 'aim and effect' test. In determining whether protectionist intent was present, the test would consider the regulatory goal that each measure pursues (aim) and a trade effect that such a measure is expected to bring (effect).¹¹⁸ Although the test is formulated to comprise two different criteria, in practice the 'effect' part of the test was marginalised by the 'aim'.¹¹⁹ In the *Malt Beverages* case, the panel adopted the 'aim and effect' test. It noted that in determining whether beers of different alcohol levels can be regarded as *like products*, the physical characteristics and the purpose of Article III (namely the 'not as to afford protection' requirement) should be considered.¹²⁰ The panel emphasised that the *like product* determination in terms of Article III must not unnecessarily

¹¹⁷ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 21.

¹¹⁸ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 21.

¹¹⁹ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 21.

¹²⁰ *United States- Measures Affecting Alcoholic and Malt Beverage*, Panel Report adopted on 19 June 1992 B.I.S.D 39S/206 at para 2.32.

infringe upon the regulatory authority and domestic policies of Members.¹²¹ This test tends to ensure that Members retain their regulatory authority within the meaning of Article III (4). If a domestic product is determined to be 'unlike' an imported product on account of the non-protectionist intentions of a measure applied to a domestic product, then the measure is considered to be consistent with Article III (4).¹²² From the protectionist viewpoint, the focus in the 'aim and effect' test is the 'aim' of the measure and the negative trade effects tend to be regarded as incidental and negligible if the measure in question possesses no protectionist intentions.¹²³

The ruling of the AB in the *Bananas III* case is considered to signify the demise of the 'aim and effect' test. The AB ruled that an interpretation of Article III (4) does not require a separate consideration of whether the measure affords protection to domestic production because Article III (4) does not explicitly refer to Article III (1).¹²⁴ Despite the AB's stance with regards to the 'aim and effect' test, the test was revived to an extent in the *Asbestos* case (which is considered in more detail in the *like product* analysis section). The 'no less favourable treatment' consideration directs scrutiny towards an unequal trade impact that may be caused by the measure in question. This consideration does not take into account the regulatory intention and instead focuses on whether equal opportunities of competition involving domestic and imported products may be undermined by the specific

¹²¹ *United States- Measures Affecting Alcoholic and Malt Beverage*, Panel Report adopted on 19 June 1992 B.I.S.D 39S/206 at para 5.72.

¹²² Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 22.

¹²³ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 22.

¹²⁴ *European Communities-Regime for the Importation, Sale and Distribution of Bananas*, WT/DS27/AB/R, adopted 25 September 1997, DSR 1997: II, 591.

measure.¹²⁵ Therefore this consideration could be regarded as representing a pro-trade position with respect to market-access concerns. The AB shed further light on this consideration in the *Korean Beef* case, noting that explicitly different treatment of imported products did not in itself confirm a violation of Article III (4). The AB emphasised that further analysis should be undertaken to consider whether a measure modifies the ‘conditions of completion’ to the detriment of imported products.¹²⁶

4.2.3 Contravention of the non-discrimination obligations

In the context of trade liberalisation in CFGs, it is most likely that the MFN rule would be contravened. This is because should the subset of countries that decides to lower tariffs in CFGs not afford the same benefit to other WTO Members despite the Members not being party to the SETA-type agreement, the MFN rule in Article 1 of the GATT would be contravened. The NT rule will be contravened if CFGs imported from a state not party to the SETA-type agreement are not afforded the same treatment in terms of laws and regulations as like domestic products of a state that is a Member to the agreement. There are two manners in which the contravention of the GATT obligations can be circumvented. Firstly, the *like product* analysis can be utilised to distinguish between CFGs and products that are similar yet do not render the same climate mitigation results. The current approach to the *like product* analysis is considered through the relevant case law and commentary. There is also a consideration of the emerging trend to include PPMs in the *like product* analysis, which would assist in not only differentiating between similar products that have different climate mitigation effects but products that have similar end-uses but were produced in a non-climate-friendly manner. Lastly the general exceptions to the GATT

¹²⁵ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 23.

¹²⁶ *Korea- Measures Affecting Imports of Fresh, Chilled and Frozen Beef*, WT/DS 161, Appellate Body and Panel Report adopted on January 10, 2001 at para 137-144.

obligations found in Article XX are considered in order to determine if these exceptions could be successfully raised in the present context.

4.3 THE LIKE PRODUCT ANALYSIS

Two of the binding requirements imposed by the GATT pertain to the obligation of non-discrimination between *like products* imported from different countries and the obligation of non-discrimination between imported products and like domestic products.¹²⁷ It has become evident that should the parties to a SETA-type agreement lower trade barriers to CFGs amongst themselves, there would likely be a contravention of the above-cited GATT obligations. Both obligations require that *like products* are subject to the same trade benefits; however, if there is no *like product*, then there is no discrimination. Non-discrimination is linked to the notion of levelling the playing fields and competition. While *like products* inherently compete, non-like products do so only to the extent that they are mutually substitutable.¹²⁸

Neither the Contracting Parties nor the GATT panels have determined a general definition of *like products*.¹²⁹ The GATT jurisprudence and the Report of the Working Party on Border Tax Adjustments have, however, shed light on the interpretation of *like products*. The Report states that whether two products can be regarded as *like products* should be determined on a case-by-case basis. Various criteria were suggested for determining if products were *like products*, such as the products' end use in a given market;

¹²⁷ The GATT at Article I and III.

¹²⁸ Cottier T & Oesch M "Direct and indirect discrimination in WTO law and EU law" 2011 Working paper no 2011/16 Swiss National Centre of Competence Research 1-23.

¹²⁹ Although under Article 2.6 of the Antidumping Agreement (Agreement on the Implementation of Article VI of the GATT), there is a definition of the term like as follows:

Throughout this Agreement the term 'like product' shall be interpreted to mean a product which is identical, i.e. alike in all respects to the product under consideration, or in the absence of such a product, another product which, although not alike in all respects, has characteristics closely resembling those of the product under consideration.

consumers' tastes and habits; and the products' properties, nature and quality.¹³⁰ Critics have argued that the above criteria can render superficial results at times. For example, in merely considering the above criteria, an imported cup is similar to a cup of domestic origin, and thus the imported cup must be accorded no less favourable treatment than the domestic product. It might be correct to conclude that the two objects might be the same when considered as cups, but this fact might not be relevant in the context of the domestic measure.¹³¹ It could be the case that one cup is regarded as a 'non-recyclable beverage container' or a 'material producing poisonous gases when incinerated'. Thus critics argue that to compare the objects as cups when they are not distinguished by the contracting parties as such would be arbitrary.¹³² With regards to CFGs, the above argument could prove useful as it would allow products to be differentiated on the basis of the viewpoints of the contracting parties.

The above criteria put forth in the Report are not considered exhaustive or in fact binding, and through a consideration of the relevant case law it will become apparent that whether products are regarded as *like products* is determined on a case-by-case basis. The conclusions of both the panel and the AB in the *Asbestos* case have contributed important considerations to the *like product* analysis. In considering the likeness between asbestos fibres and substitute fibres, the panel utilised the traditional route as represented by the Report of the Working Party on Border Tax Adjustments to explore the issues of *like products*. The panel noted three criteria by which to examine *like products*: the products' properties, nature and quality; the products' end-

¹³⁰ Report of the Working Party on Border Tax Adjustments, B.I.S.D. 18S/97 18.

¹³¹ Tsai E "Like is a four-letter word- GATT Article III's like product conundrum" 1999 *Berkeley Journal of International Law* 26-60.

¹³² Tsai E "Like is a four-letter word- GATT Article III's like product conundrum" 1999 *Berkeley Journal of International Law* 26-60.

uses in a given market; and consumers' tastes and habits.¹³³ Furthermore, the panel emphasised that a degree of discretion would have to be utilised in determining whether products are considered to be *like products*.¹³⁴ The panel focused on the properties of the two fibre products and observed that the properties are the same to the extent that one product can replace the other.¹³⁵ The panel further noted that the 'chemical and physical characteristics' between the different fibres are not decisive when determining the likeness of the products since an emphasis on such characteristics would impact the flexibility of the approach and narrow the scope of *like products*. With regards to the remaining criteria, the panel rejected the relevance of consumers' tastes and habits and held that the properties of the two products allowed certain 'identical or at least similar' end-uses.¹³⁶ Importantly, the EC tried to argue that the 'risk' of the product should be considered under the criteria of properties of the product. The panel rejected this argument and held that the structure of the GATT did not allow for the consideration of such a factor during the likeness analysis and that the introduction of the 'risk' factor at that stage would nullify the effect of Article XX (b).¹³⁷

The reasoning adopted by the panel would have been problematic in terms of trade in CFGs on two counts if the AB did not reject the panel's ruling. Firstly, if consumers' tastes and habits are merely regarded as unnecessary

¹³³ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R, adopted 5 April 2001 at para 112.

¹³⁴ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R, adopted 5 April 2001 at para 8. 114.

¹³⁵ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R, adopted 5 April 2001 at para 8.124.

¹³⁶ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R, adopted 5 April 2001 at para 8.123.

¹³⁷ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R, adopted 5 April 2001 at para 8.103.

criteria that need not be considered, there could be an impact on the process of trade liberalisation in CFGs. This is because consumers may be personally motivated to procure CFGs as opposed to products that are not climate-friendly, which would be an important consideration to note when determining the likeness of two products. Secondly, if the 'risk' of a product is not taken into account, trade liberalisation in CFGs could be further frustrated. For example, two products could be regarded as 'similar', yet the one product is a CFG whilst the other product poses a risk to the mitigation of climate change. Thus in the context of climate change mitigation, the risks that certain products pose should be an important criteria considered in the *like product* analysis.

The AB, however, rejected the panel's ruling and held that a health risk factor should be incorporated in the determination of the properties of the products and ultimately in the likeness analysis. The AB found that the physical properties of a product must be fully examined, including those physical properties that are likely to influence the competitive relationship between products in the marketplace.¹³⁸ More importantly, in the context of CFGs the AB took a more progressive stance on the consideration of consumers' tastes. The AB held the view that 'consumer perceptions may similarly influence, modify or even render obsolete the traditional uses of the products in question'.¹³⁹ The AB went on to state further that a manufacturer cannot ignore the preferences of the consumer of its products because if the risks posed by the product are significantly great, then the consumer may simply decide to not purchase the product. Furthermore, in situations where the products pose a risk to human health, the AB was of the opinion that the manufacturers' decisions will be influenced by further factors such as the

¹³⁸ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R, adopted 5 April 2001, DSR 2001:VII, 3305 at para 114.

¹³⁹ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R, adopted 5 April 2001, DSR 2001:VII, 3305 at para 120.

possibility of civil liability that might arise from marketing products that pose a health risk.¹⁴⁰ Thus the findings of the AB indicate an important shift with regards to what is considered in the *like product* analysis and importantly refute the panel's dismissal of requirements that should be considered in the analysis, specifically in the context of CFGs.

In the *Asbestos* case the AB departed from the previous jurisprudence by ruling in line with the 'aim and effect' test. This test assumes that a product associated with a non-protectionist, and thus legitimate, aim and effect should be considered an 'unlike' product within the meaning of Article III of the GATT, even if the properties of the products are similar.¹⁴¹ Although this test was explicitly rejected by the AB in *Banana III*, the AB seemed intent on at least implicitly reviving the test in *Asbestos*.¹⁴² The AB stressed that the term *like product* in Article III (4) must be interpreted to give proper scope and meaning to the general principle in Article III (1), that is the 'not as to afford protection' requirement.¹⁴³ The apparent revival of the 'aim and effect' test could be a positive transformation in the context of trade liberalisation in CFGs. This is because the test focuses on the aim of the measure in question, thus considering the intent with which the measure was implemented. As mentioned above, the negative trade effects tend to be regarded as incidental and negligible if it is concluded that the measure did not possess protectionist intentions.¹⁴⁴ Therefore should a subset of states

¹⁴⁰ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R, adopted 5 April 2001, DSR 2001:VII, 3305 at para 122.

¹⁴¹ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 64.

¹⁴² Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 65.

¹⁴³ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/AB/R, adopted 5 April 2001, DSR 2001:VII, 3305 at para 98.

¹⁴⁴ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 22.

decide to lower tariffs in CFGs amongst themselves and it is determined that the intention behind such a measure is in fact to mitigate climate change and not protectionist, then under the 'aim and effect' test the measure would be deemed non-discriminatory.

Critics have pointed out that the reasoning of the AB is problematic for two reasons. Firstly, the AB asserted that Article III (4) and Article XX (b) are independent provisions and should be interpreted separately; however, the AB was to an extent forced to incorporate the Article XX (b) element of 'health risks' into its Article III (4) consideration of the 'competitive relationship in the marketplace'.¹⁴⁵ Secondly, critics argue that in terms of the above ruling, too many domestic regulations may be redeemed as non-discriminatory without the relevant justifications. It is argued that the legal threshold of the 'aim and effect' test is very low and that a mere finding of non-protectionist intent can save a disputed measure.¹⁴⁶

Even though the line of reasoning adopted by the AB in the *Asbestos* case has been criticised, it could nonetheless prove to be helpful as social issues such as health and possibly environmental concerns would be considered at an earlier stage rather than as an exception in terms of Article XX.¹⁴⁷ Although regarded as formalistic, the 'aim and effect' test is more appropriate in the context of CFGs. It focuses on the intention behind the apparent discrimination and does not impede the analysis by merely focusing on the characteristics of the products. In the case of a SETA-type agreement, the intention behind lowering the tariffs in CFGs would be to mitigate climate change and would thus not represent a protectionist measure. Unfortunately

¹⁴⁵ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 65.

¹⁴⁶ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 65.

¹⁴⁷ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 66.

the current approach to the *like product* analysis is still problematic, because in certain cases products will be regarded as *like products* even though they have very different impacts on the environment. For example, two products could be regarded as *like products* although one could have been manufactured and produced in an environmentally harmful manner whilst the other was manufactured in a climate-friendly manner. Another example is where two products are considered to be *like products* even though their consumption or end-uses are markedly different; while one product could be assisting in mitigating climate change, the other could be environmentally harmful. In order to address the above issues, a trend has emerged whereby PPMs are considered within the *like product* analysis (which could effectively narrow the scope of products that are considered to be CFGs).

4.4 PROCESSES AND PRODUCTION METHODS

A concept that further strains the relationship between trade and the environment is the distinction between product characteristics and the process utilised to produce the product.¹⁴⁸ The term Processes and Production Method (PPM) is defined 'as the way in which products are manufactured or processed and natural resources extracted or harvested'.¹⁴⁹ The process utilised for producing a product is often more important from an environmental perspective than the product itself. This is because processes that pollute the water or air or exhaust natural resources may be regarded as more damaging to the environment and sustainable development than the actual product.¹⁵⁰

¹⁴⁸ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 33.

¹⁴⁹ OECD Processes and Production Methods: Conceptual framework and consideration on use of PPM-based trade measures OCDE/GD(97)137 at 7.

¹⁵⁰ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 33.

There are two different types of PPMs that need to be distinguished. More specifically, some PPMs cause ‘consumption externalities’ that change the product’s performance to such an extent that the product causes or threatens to cause damage to the environment when it is consumed, used or disposed of. This type of PPM, which is directly related to the physical characteristics of the product concerned, is called a product-related PPM.¹⁵¹ An example of such a product would be cattle that are raised on growth hormones that can lead to meat that has hormone residues. The second type of PPMs causes environmental effects in the production process of a product but neither transmits such effects to the product itself nor affects the product’s characteristics.¹⁵² These PPMs may lead to ‘production externalities’ not only in the production state, but also through the spill-over effect in other states. This type of PPM is called a non-product related PPM, and an example would be methods of cutting wood without a sustainable development program.¹⁵³ and an example would be methods of cutting wood without a sustainable development program.¹⁵⁴ Non-product related PPMs should be properly regulated by process standards in producing states. However if a PPM regulation of a producing state is ineffective or insufficient, other states that may suffer from production externalities due to transboundary spill over effects and may want to enforce their own regulation to cease the damage caused by the PPM in issue.¹⁵⁵ Critics have pointed out a problem that arises when the related and non-related PPM distinction is emphasised. This

¹⁵¹ Satoru T “Live with a Quiet but Uneasy Status Quo?” *The Research Institute of Economy. Trade and Industry* 1-16.

¹⁵² Satoru T “Live with a Quiet but Uneasy Status Quo?” *The Research Institute of Economy. Trade and Industry* 1-16.

¹⁵³ Satoru T “Live with a Quiet but Uneasy Status Quo?” *The Research Institute of Economy. Trade and Industry* 1-16.

¹⁵⁴ Satoru T “Live with a Quiet but Uneasy Status Quo?” *The Research Institute of Economy. Trade and Industry* 1-16.

¹⁵⁵ Satoru T “Live with a Quiet but Uneasy Status Quo?” *The Research Institute of Economy. Trade and Industry* 1-16.

problem is evident with regard to regulations that have been implemented for numerous reasons. For example, a prohibition on food that has been genetically modified might be used to address the impact on health as well as the ecological impact on agricultural production.¹⁵⁶ Thus the same regulation could be product and non-product related.

From a policy point of view, the development of international law that recognises and addresses PPMs is important for several reasons. Firstly, PPMs are universally recognised as having environmental impacts that have global effects, such as ozone depletion through the industrial use of halons and chlorofluorocarbons. Secondly, PPMs can result in transboundary harm in terms of air or water pollution and can indirectly harm human, animal or plant health by introducing substances capable of long-term harm through the production cycle. Lastly, the targeting of PPM may be the most effective mechanism for deterring the exploitation of natural resources through reckless methods.¹⁵⁷

The use of environmental PPMs is regarded as controversial for two reasons. Firstly, a PPM can create trade restrictions that increase the costs for an exporter to supply to a foreign market.¹⁵⁸ Secondly, PPMs are an indication from importing states to exporting states about the environmental laws and practices that the importing state believes the exporting state should adopt. The use of trade as a means to transmit values has occurred throughout

¹⁵⁶ Charnovitz S "The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality" 2002 *Yale Journal of International Law* at 66.

¹⁵⁷ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 15.

¹⁵⁸ Charnovitz S "The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality" 2002 *Yale Journal of International Law* at 62.

history. However the PPMs are different because they utilise government trade restrictions to transmit values.¹⁵⁹

Under the old GATT system it was established that a non-product related PPM would be *prima facie* inconsistent with Article III (4) of the GATT, as the PPM had no impact on the characteristics of the product itself.¹⁶⁰ For instance, a domestic regulation that prohibits the use or sale of imported meat or meat products that were harvested through the use of inhumane measures and that applies equally to like domestic products would amount to a violation of Article III (4), even though the regulation could be justified under Article XX at a later stage. As the above principle of not considering non-product related PPMs originates from the structure of the GATT that is primarily concerned with trade in goods, contracting parties thus primarily consider regulations associated with 'products and process-based conditions as extra conditions that were never part of the bargain'.¹⁶¹ Critics of the above principle argue that it imposes an 'unwarranted legal burden' on all regulations that purport to protect legitimate values (such as environmental protection), since they need to be justified by regulating Members.¹⁶² Moreover, the European Parliament urged the European Commission to request that the WTO create a Statement of Understanding concerning the application of the principle of *like products*, which would allow products considered to be otherwise identical to be differentiated where the production or processing methods of such products have different impacts on the

¹⁵⁹ Charnovitz S "The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality" 2002 *Yale Journal of International Law* at 62.

¹⁶⁰ Hudec E "The Product-Process Doctrine in GATT/WTO Jurisprudence in New Directions" in *International Economic Law: Essays in honour of John.H.Jackson* (Marco Bronckers & Reinhard Quick eds 2000) at 187.

¹⁶¹ Hudec E "The Product-Process Doctrine in GATT/WTO Jurisprudence in New Directions" in *International Economic Law: Essays in honour of John.H.Jackson* (Marco Bronckers & Reinhard Quick eds 2000) at 192.

¹⁶² Hudec E "The Product-Process Doctrine in GATT/WTO Jurisprudence in New Directions" in *International Economic Law: Essays in honour of John.H.Jackson* (Marco Bronckers & Reinhard Quick eds 2000) at 188.

environment.¹⁶³ Put simply, these critics contend that regulatory measures grounded in legitimate policy objectives should be deemed consistent with the MFN and NT rules whether product or process-based and that they should not need to undergo a further justification process under Article XX. In a doctrinal sense, the position of the critics parallels that of those who promote the ‘aim and effect’ test.¹⁶⁴ Both camps reason that regulatory distinctions should be included in the *like product* test, thus regarding products that violate certain legitimate regulations as unlike vis-à-vis products that comply with the regulations.¹⁶⁵

The jurisprudence addressing the relevance of process and production methods when enquiring whether two products can be regarded as *like products* merits consideration. Several cases have held that the GATT MFN and NT rules must consider the characteristics of the product itself, and not consider the process utilised to produce the product.¹⁶⁶ The *Belgian Family Allowances*¹⁶⁷ case was the first case to endorse this view. The case recognised that if states were allowed under the GATT to have different treatment for importing products from different countries based on the type of labour laws and government family allowances, floodgates would potentially open to different processes being used to undermine the principle of non-discrimination.¹⁶⁸

¹⁶³ Bronckers M, McNelis N, Rethinking the ‘like product’ definition in WTO law: Anti-dumping an environmental protection’ in *Regulatory barriers and the principle of non-discrimination in World Trade Law* (Thomas Xottier & Paetros Mavroidis eds. (2000) 348-385.

¹⁶⁴ Bronckers M, McNelis N, Rethinking the ‘like product’ definition in WTO law: Anti-dumping an environmental protection’ in *Regulatory barriers and the principle of non-discrimination in World Trade Law* (Thomas Xottier & Paetros Mavroidis eds. (2000) 348-385.

¹⁶⁵ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 67.

¹⁶⁶ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 33.

¹⁶⁷ *Belgian Family Allowances*, BISD 1S/59 adopted 7 November 1952.

¹⁶⁸ *Belgian Family Allowances*, BISD 1S/59 adopted 7 November 1952.

More recent cases have, however, noted the disadvantages to both trade and the environment when the process and production methods are not acknowledged.¹⁶⁹ From an environmental perspective, the processes utilised to manufacture the products can pose real threats to the environment. Possibilities for unfair trade actions could also result; for example from a trade perspective, lenient regulations in one producing state could give producers a comparative advantage of lower production costs.¹⁷⁰ It has been put forth that one of the reasons that the older GATT cases focused only on the characteristics of the product is to avoid the possible dangers that could result from a greater variety of societal, cultural and regulatory differences posing barriers to trade that would further undermine trade liberalisation.¹⁷¹ There is thus a need to develop a solution that prevents the above from occurring. This would entail developing an approach whereby trade barriers based on processes can be judged as either an appropriate measure to address the competing trade and environmental policies or as a measure that is in fact protectionist.¹⁷²

A widely held view is that only product requirements are contemplated by the GATT rules Article III and XI, not the processes utilised to manufacture the products.¹⁷³ Supporters of this view rely on a strict interpretation of the text and the 'slippery slope' policy argument that states that once PPM restrictions are permissible; it would be difficult to limit the various potential objections that states may raise against the manner in which products are produced in exporting countries. This argument raises further concerns of protectionism and the arbitrary, unilateral imposition of one state's policies on

¹⁶⁹ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 33.

¹⁷⁰ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 33.

¹⁷¹ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 34.

¹⁷² Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 34.

¹⁷³ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 13.

another state.¹⁷⁴ Although these concerns are legitimate, a more pressing issue that arises is whether these concerns can be solely addressed through a complete prohibition of PPM considerations and whether the GATT in fact adopts an exclusive approach.¹⁷⁵

The case law interpreting the validity of PPMs will be considered from the perspective of not only violations of the MFN and NT rule but also from the perspective of product and non-product related PPMs. In the *Indonesia Automobile* decision, the Panel concluded that according to Article 1 of the GATT, an advantage 'cannot be made conditional on any criteria that are not related to the imported product itself.'¹⁷⁶ The Panel further expanded its conclusion by stating that the rights of WTO members cannot be rendered conditional on or even affected by any private contractual obligations in place. The regulation in question was thus deemed a violation of Article 1.¹⁷⁷ In the *Canada Automotive* the Panel also concluded that Article 1 of the GATT had been violated, however the approach adopted by the Panel was more nuanced.¹⁷⁸ It noted that making an advantage conditional on criteria not related to the imported product itself is not inconsistent with Article 1 per se; irrespective of whether and how such criteria relate to the origin of the imported product.¹⁷⁹ The Panel distinguished from the *Belgian Family Allowances* as well as the *Indonesia Automobile* cases, both of which were

¹⁷⁴ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 13.

¹⁷⁵ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 13.

¹⁷⁶ Indonesia- Certain Measures Affecting the Automobile Industry, Panel Report adopted on July 2 1998, WT/DS54/R.

¹⁷⁷ Indonesia- Certain Measures Affecting the Automobile Industry, Panel Report adopted on July 2 1998, WT/DS54/R.

¹⁷⁸ Canada- Certain Measures Affecting the Automobile Industry, Panel Report adopted on February 11 2000, WT/DS/139/R.

¹⁷⁹ Charnovitz S "The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality" 2002 *Yale Journal of International Law* at 85.

regarded as relating to origin-based discrimination.¹⁸⁰ In other words the Panel suggested that truly origin-neutral criteria might be permissible under Article I.¹⁸¹ Briefly considering the outcomes of the case law on PPMs and Article I, it can be concluded that a government policy standard violates the MFN rule if it is origin contingent. Although the *Canada Automotive* did suggest that PPMs are not per se violations of the MFN rule.¹⁸² The above illustrates, the consideration of PPMs in terms of the MFN rule remains unsettled and it likely that authorities will come to the same conclusion with regards to PPMs in the context of CFGs.

One of the first cases to consider the use of PPMs as a violation of the NT rule was a dispute between Mexico and the US known as the *Tuna/Dolphins* dispute. The panel asserted that the production method was irrelevant to assessing the quality of the product.¹⁸³ When the same dispute was considered three years later (this time between the US and the EC), the panel reached the same conclusion with regards to the illegality of the US's measures. However, neither of these decisions has been adopted.¹⁸⁴ The US Gasoline case involved a producer characteristics PPM regulation for gasoline composition.¹⁸⁵ The panel concluded that the identification of like

¹⁸⁰ Canada- Certain Measures Affecting the Automobile Industry, Panel Report adopted on February 11 2000, WT/DS/139/R.

¹⁸¹ Charnovitz S "The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality" 2002 *Yale Journal of International Law* at 85.

¹⁸² Charnovitz S "The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality" 2002 *Yale Journal of International Law* at 85.

¹⁸³ *United States- Restrictions on the imports of tuna*, DS21/R 3 September 1991.

¹⁸⁴ *United States- Restrictions on imports of tuna*, DS29/R 16 June 1994 at para 5.8.

¹⁸⁵ *United States- Standards for Reformulated and Conventional Gasoline* WT/DS2/ABR, adopted 20 May 1996, DSR 1996: I, 3

products in Article III(4) needs to be done ‘on the objective basis of their likeness as products’ and not according to ‘extraneous factors’.¹⁸⁶

Critics have set out to prove that the consideration of PPMs does not violate trade rules despite the persistent stance taken by the WTO on this matter. In interpreting the GATT obligations, the textual ambiguities of the national treatment rule in Article III have been resolved unfavourably to PPMs:¹⁸⁷ the producer characteristics standard was considered to be a violation of Article III in three cases.¹⁸⁸ Certain authors are of the opinion that origin-neutral process measures are not strictly prohibited by Article III. They contrast these measures with country-based measures that are government policy standards and would be prohibited by Article III.¹⁸⁹ As a result of the reluctance to include environmental PPMs in the *like product* analysis, the reliance on Article XX exceptions has become more prominent. This is not to say that the GATT prohibits environmental PPMs as such, as PPM-based import bans are indeed likely to contravene Articles I and III of the GATT. Nonetheless, if these measures are undertaken for an environmental purpose they may still qualify as an Article XX (b) or (g) exception.¹⁹⁰ The need to include PPMs in the *like product* analysis is essential as the manner in which products are harvested, manufactured and produced may have detrimental environmental impacts. The resistance against PPMs is counter-intuitive to climate change mitigation as products that have the same end-

¹⁸⁶ *United States- Standards for Reformulated and Conventional Gasoline* WT/DS2/ABR, adopted 20 May 1996, DSR 1996: I, 3

¹⁸⁷ Charnovitz S “The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality” 2002 *Yale Journal of International Law* at 91.

¹⁸⁸ *United States- Measures Affecting Alcoholic and Malt, United States- Standards for Reformulated and Conventional Gasoline, Indonesia-Certain Measures Affecting the Automobile Industry*.

¹⁸⁹ Howse R, Regan D “The Product/Process Distinction- An illusory basis for disciplining ‘unilateralism’ in trade policy” 2000 *European Journal of International Law* 272.

¹⁹⁰ Charnovitz S “The Law of Environmental PPMs in the WTO: Debunking the Myth of Illegality” 2002 *Yale Journal of International Law* at 101.

uses and characteristics but have been produced in vastly different manners, (e.g., one in an environmentally-friendly manner and the other not) should be regarded as unlike products.

As a result of the likelihood of the MFN rule being contravened, the parties to the SETA-type agreement would need to consider a means by which to either comply with the obligation or raise an exception to the obligation. There are a number of exceptions contained in the GATT itself and actions that have been taken within the context of the GATT or outside of it that also establish departures from the MFN rule.¹⁹¹ There are two exceptions contained in the GATT that pertain to the MFN rule in the present context. The first exception is Article XXV of the GATT that contains a general power of waiver by a special two-thirds majority of the contracting parties. It has however been argued that this waiver should not be used to alter the effects of Article I because amendments to that Article require unanimity.¹⁹² Nevertheless there have been a number of waivers that have been adopted granting exemptions from MFN obligations; such as the 1971 waiver for the preference system for trade of developing countries.¹⁹³ The second exception is found in Article XX which contains the general exceptions to all GATT obligations. Generally the measures taken under this provision must be 'necessary' and the exception does not apply if its purpose could be served by a less restrictive alternative. The difficulties that arise with regards to Article XX will be considered at a later stage. The GATT Panel and AB have in some cases adopted a strict interpretation approach thus making it difficult for states to successfully claim an exception to a GATT obligation.

¹⁹¹ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 61.

¹⁹² Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 62 and GATT Document L/403 (1955).

¹⁹³ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 62.

Several GATT cases that consider PPM measures have proceeded to considering the measure under Article XX after it has been determined that the specific measure has violated the MFN or NT rule. It is thus necessary to examine the scope and content of Article XX as well as the relevant case law. This is because even if the Members of the SETA-type agreement cannot utilise PPMs to distinguish between CFGs and other products, they might still be able to justify the lowered trade barrier under the exceptions.

4.5 THE LAW OF JUSTIFICATION

4.5.1 Overview of Article XX

Article XX is structured as a general exception and therefore any material obligation under the GATT can be made subject to it. The Article consists of a preamble (known as the chapeau) and a list of ten specific exceptions. The problem with the content of Article XX is that it reflects the regulatory sensitivities of the 1940s, which is when the Article was adopted; it may as a result be out-dated and not reflective of contemporary realities¹⁹⁴ The exceptions listed in Article XX are 'subject to the requirement that such measures are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade'.¹⁹⁵ Two exceptions listed in the Article are relevant the context of environmental matters. They are paragraph b) for measures 'necessary to protect human, animal or plant life or health' and paragraph g) for measures 'relating to the conservation of exhaustible natural resources if such measures are made

¹⁹⁴ Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003) 34.

¹⁹⁵ The GATT at Article XX.

effective in conjunction with restrictions on domestic production or consumption'.¹⁹⁶

In the *Gasoline* case, the AB shifted its interpretative focus to the chapeau of Article XX and stressed the fact that the chapeau addresses the manner in which the specific measure is applied rather than the measure itself or its specific content.¹⁹⁷ The AB manifested the application-orientated chapeau test in the *Shrimp-Turtle* case and admonished the panel for being too focused on the 'design of the measure' and for failing to inquire how the application of the measure constitutes 'a means of arbitrary or unjustifiable discrimination'.¹⁹⁸ This approach adopted by the AB tends to promote the goals of both free trade and regulatory autonomy. The WTO Appellate Body altered the strict historical interpretation approach through a liberal interpretation of Article XX of the GATT to create more room for the possibility of unilateral trade measures being regarded as valid in the *Shrimp/Turtle* dispute.¹⁹⁹ In terms of this ruling, import restrictions adopted for the protection of a legitimate interest in Article XX could require an application of environmental standards in areas beyond national jurisdiction as a way to induce cooperation in the conservation of common resources.²⁰⁰ The AB nonetheless concluded that the manner in which the US applied the measure constituted arbitrary or unjustifiable discrimination between countries where the same conditions prevailed in breach of the Article XX

¹⁹⁶ The GATT at Article XX (b), (g).

¹⁹⁷ *United States- Standards for Reformulated and Conventional Gasoline*, WT/DS2/ABR, adopted 20 May 1996, DSR 1996: I, 3 at para 22.

¹⁹⁸ *United States- Import Prohibition of Certain Shrimp and Shrimp Products*, Appellate Body Report, WT/DS58/AB/R, adopted 6 November 1998: VII 2755 ILM at para 115.

¹⁹⁹ *United States- Import Prohibition of Certain Shrimp and Shrimp Products*, Appellate Body Report, WT/DS58/AB/R, adopted 6 November 1998: VII 2755 ILM 118.

²⁰⁰ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 14.

chapeau.²⁰¹ This interpretation of Article XX by the AB signifies progress in comparison to the *Tuna/Dolphin* case, as it explicitly recognises that in principle a country could adopt a policy that requires compliance from domestic and foreign exporting producers and that such a policy could per se be consistent with the GATT.²⁰² This expansive interpretation is also more consistent with the evolving structure of international environmental law and is bound to undermine the superficial and rigid distinction between product and process characteristics.²⁰³ It is therefore necessary to consider certain cases that have dealt with the environmental exceptions under Article XX to determine if the Members to the SETA-type agreement would be successful in raising such an exception.

4.5.2 Case law on Article XX

The practice adopted by the GATT panels in the implementation of these exceptions has been to allow states to retain a wide degree of discretion in the determination of environmental, health and safety standards applicable to imported products.²⁰⁴ The GATT's recognition of the principle of sovereignty has allowed states to determine their own environmental policy provided that the tax measure is non-discriminatory. This allows for imported products to be subject to eco-taxes in order to incorporate the environmental costs of the product related to its use or disposal.²⁰⁵

²⁰¹ *US Import Prohibition of Certain Shrimp and Shrimp Products*, Appellate Body Report, WT/DS58/AB/R (1999) ILM 118 at para 184.

²⁰² Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 15.

²⁰³ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 15.

²⁰⁴ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 9.

²⁰⁵ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 10.

The *Thailand's Restrictions on Importation of Cigarettes*²⁰⁶ case considered the likely trade restrictive effects of domestic and international efforts aimed at reducing tobacco consumption. The panel upheld the US claim that Thailand had violated the provisions of the GATT by refusing to grant an import licence for cigarettes from foreign countries for health reasons without adopting the same restrictions on locally produced cigarettes.²⁰⁷ Article XX (b) was evaluated and the requirement that a measure be 'necessary to protect human, animal or plant life or health' was interpreted to mean that a member could only justify a violation of the GATT rules if there was no alternative measure that would be regarded as consistent with the GATT.²⁰⁸ In cases where no such alternative measure is available, a Member would have to apply a measure that would be regarded as the least inconsistent with the GATT provisions.²⁰⁹ The precedent established in the *Thai Cigarettes* case is noteworthy from the perspective of developing countries, as alternative measures that are reasonably available to a developing party are directly related to the feasibility of implementing such a measure in that country.²¹⁰ This decision has been criticised for not taking into account the possibility that the alternative measures might involve regulatory and compliance costs that are much higher or may be impractical to implement effectively in a developing country.²¹¹ The AB in the *Korea-Beef* case reaffirmed the 'least trade restrictive approach' adopted in the *Thai Cigarettes* case; however, it added the following three new factors: the contribution of the measure to achieve the policy objective, the importance of

²⁰⁶ *Thailand- Restrictions on Importation of and Internal Taxes on Cigarettes* BISD 200 1990.

²⁰⁷ Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 10.

²⁰⁸ *Thailand- Restrictions on Importation of and Internal Taxes on Cigarettes* BISD 200 1990.

²⁰⁹ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 45.

²¹⁰ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 65.

²¹¹ United States- Restrictions on import of tuna, DS29/R, 16 Jun 1994, not adopted at para 5.28.

the common interests or values protected and the impact on the law governing exporting and importing.²¹² The *EC-Asbestos* dispute considered whether the French ban on chrysolite asbestos could be justified under the Article XX (b) exception. The dispute settlement panel concluded that the measure was justified to fall under the exception; this conclusion was confirmed by the AB.²¹³ In interpreting the Article XX exceptions, the AB relied on the same factors as set out in the *Korea-Beef* case and noted that the inquiry is essentially a ‘weighing and balancing process’.²¹⁴ The *Brazil-Retreaded Tyres* decision added another element to the necessity test; the ‘material contribution’ requirement which requires the contribution of the measure to the achievement of the objective to be material and not merely marginal or insignificant.²¹⁵ Article XX (g) allows for discrimination if the measure has a policy goal that is related to ‘the conservation of exhaustible natural resources’. A resource may be living or non-living and it does not have to be classified as an endangered resource to be regarded as an exhaustible one.²¹⁶ The AB noted in the *US-Gasoline* case that measures to control air pollution were measures to conserve exhaustible natural resources.²¹⁷

It is necessary to consider the above in light of the liberalisation of trade in CFGs. The Members of the SETA-type agreement could argue that reducing trade barriers to CFGs is a necessary measure for achieving the policy objective of mitigating climate change. Furthermore, that there are no other

²¹² Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 46.

²¹³ Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands 45.

²¹⁴ *European Communities- Measures Affecting Asbestos and Asbestos-Containing Products*, WT/DS135/R, adopted 5 April 2001.

²¹⁵ *Brazil-Measures Affecting Imports of Retreaded Tyres*, WT/DS332/AB/R, adopted 17 December 2007.

²¹⁶ Matsushita M “The World Trade Organization: Law, practice and policy” 2003 at 147.

²¹⁷ *United States- Standards for Reformulated and Conventional Gasoline*, WT/DS2/ABR, adopted 20 May 1996, DSR 1996: I, 3 at para 6.36.

reasonable alternatives, because although other products may have the same end-use, the contribution they would make to mitigating climate change is vastly different. In relation to the Article XX (g) exception if the Members of the SETA-type agreement can illustrate that reducing trade barriers in CFGs is related to the conservation of an exhaustible resource, the requirements to utilise Article XX (g) exception would be satisfied. Even if the Members can illustrate that the lowering of trade barriers in CFGs falls within the exceptions in Article XX, they would still have to satisfy the chapeau of Article XX as discussed above.

Regarding all of the above it is necessary to consider the likelihood of the SETA-type agreement being regarded as compatible under the framework of the GATT. As illustrated above if certain WTO Members decide to conclude a separate agreement in order to assist the liberalisation on trade in CFGs it is most likely that such an agreement would not only contravene the MFN rule but the NT rule as well. This is because the task of differentiating between those goods which are truly CFG and those that are not is a complex task. It is most likely that CFGs and those goods similar to CFGs will be regarded as *like products* even with the development of PPMs. The current case law on PPMs remains unsettled and thus the consideration PPMs (specifically non-product related PPMs) in the *like product* analysis is unlikely. Perhaps the Members to the SETA-type agreement would be able to justify the contraventions of the MFN and NT rule under the Article XX exceptions, however, it is most likely that the Members will not be successful. In order to encourage the liberalisation of trade in CFGs, one should advocate that PPMs should be regarded as a legitimate basis to distinguish between products and that perhaps the development of Life-Cycle Sustainability Assessments within the *like product* analysis could be a means of achieving the above.

Chapter 5

The Way Forward

The focus of this chapter is to consider the possibilities of addressing the GATT obstacles as set out above. It is likely that should a subset of WTO members decide to conclude a SETA-type agreement that such action is likely to be considered incompatible with the GATT rules. The first possible solution would be to justify such a measure under the Article XX exceptions, should the case be that the parties were unable to argue that CFGs and other products should be distinguished on the basis of their PPMs and not merely their physical characteristics or end-uses. The second possible solution would be to amend the GATT rules to ensure that the actions taken by the Members of the SETA-type agreement do not violate any GATT obligations. In light of the important intersection between trade and the environment, and trade and climate change in particular, the time is ripe to reconsider the approach towards the interpretation of the *like product* analysis. This could be achieved through the incorporation of the Life Cycle Sustainability Assessment (which considers the overall life cycle emissions of a product from manufacturing to end-use) in to the *like product* analysis. If such an assessment is incorporated within the *like product* analysis, it would be much easier to distinguish between CFGs and other similar products that do not have climate mitigating end-uses or that were produced through environmentally damaging methods.

5.1 AMENDING THE GATT RULES AND WAIVERS

Article XXX, which provides the basic framework for amending the GATT requires unanimous consent to amend Part 1 (namely Articles I and II and the Schedules incorporated by reference) and Article XXIX and Article XX themselves. Other amendments become effective 'in respect of those contracting parties which accept them upon acceptance of two-thirds of the

Members. The structure of Article XXX has proven to be problematic and restricting. The provision that amendments that are authorised by two-thirds of the vote apply only to those governments that accept them, creates unnecessary confusion.²¹⁸

As a result of the cumbersome amendment procedure, the relationship between Article XXV and Article XXX has been evaluated. Article XXV paragraph 5 provides that by two-thirds votes (including half of the Members), GATT contracting parties may 'in exceptional circumstances waive an obligation imposed upon a contracting party by the Agreement'.²¹⁹ Often waivers are granted to obligations under Part I of the GATT (including Schedules), for instance to allow a party to change tariff concessions after reviewing its custom tariff.²²⁰ However, as Article XXX requires unanimity to amend Part I, it has been argued that waivers should not be granted to Part I unless the vote is unanimous, as waivers in effect amount to an amendment.²²¹

The GATT contracting parties have retaliated against this argument by contending that the opening clause of Article XXX states that 'except where provision for modification is made elsewhere in this Agreement' and therefore Article XXV is merely another provision for modification excepted from Article XXX.²²² A problem that arises with the reasoning of the contracting parties is that if the waiver power is unrestricted, it could be utilised to produce an

²¹⁸ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 27.

²¹⁹ The GATT at article XXV.

²²⁰ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 29.

²²¹ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 29.

²²² Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 29.

effect tantamount to that of an amendment.²²³ As a response to the above problem, the contracting parties at their eleventh session formulated a series of guidelines for issuing waivers.²²⁴ Moreover, Article XXX fails to distinguish between the rules of the GATT that are purely procedural and those that are substantive, which could present further problems. Lastly, it has been put forth that because of the developments in trade law, the notion that international trade obligations should only be imposed on a state with its consent no longer deserves recognition.²²⁵ Resorting to a formal amendment procedure would have the effect of incorporating environmental issues other than the existing Article XX exceptions and thus expanding the power of the GATT to deal with environmental issues. Although at first glance a formal amendment might be considered an appropriate response, it would introduce a component of unnecessary rigidity.²²⁶ Furthermore, it would seem from the issues outlined above that considering an amendment of the GATT rules in order to address the concerns that arise with trade liberalisation in CFGs is not the most plausible solution.

5.2 LIFE CYCLE SUSTAINABILITY ASSESSMENT

An argument to consider LCSA in the ‘like product’ analysis has been developing, based on the consideration of socio-economic factors within the trade law setting and the importance of considering sustainable development.²²⁷ In a move to further this development, the United Nations

²²³ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 29.

²²⁴ Basic Instruments and Selected Documents, 5th Supplement, adopted 1 November 1956, 25.

²²⁵ Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 30.

²²⁶ Bianchi A, “The Impact of International Trade Law on Environmental Law and Process” in Francioni F *Environment, Human Rights and the Limits of Free Trade* 2001 Hart Publishing Oregon 134.

²²⁷ Ballhorn, R “The role of government and policy in sustainable development” 2005 *McGill International Sustainable Development and Policy* at 1.

Environment Programme and the Society of Environmental Toxicology and Chemistry (SETAC) formed the Life Cycle Initiative in 2003.²²⁸ This initiative stresses that there are several factors that need to be taken into account when the characteristics of a product are examined, including the raw materials required to produce the good; the ways in which it is manufactured, distributed, utilised, maintained, repaired, and disposed of; whether it is recyclable; and its socio-economic impacts.²²⁹ The approach advocated for by the initiative resonates with the principle of sustainable development, as social, economic and environmental factors are considered simultaneously and not in isolation. Commentators have also noted that the inclusion of social and economic factors within the Life Cycle Assessment is not only practical but feasible as well.²³⁰ This form of assessment recognises that consumers are increasingly interested in obtaining information about the products they purchase. The assessment implies that everyone in the whole chain of the product's life cycle, that is from cradle to grave, has a vital role to play and takes into account all external effects at all stages.²³¹ Although the LCSA is in the early stages of development, it would be a major contribution to overcoming the current GATT obstacles that the Members to the SETA-type agreement would face. As stated above, the deployment of sustainable energy sources has proven to increase employment; this would be an important socio-economic factor that would be taken into account in the LCSA. Moreover, if LCSA is incorporated into the *like product* analysis, the

²²⁸ United Nations Environment Programme and the Society of Environmental Toxicology and Chemistry (SETAC) formed the Life Cycle Initiative "Towards a Life Cycle Sustainably Assessment- Making informed choices on products" 2011 at 2.

²²⁹ United Nations Environment Programme and the Society of Environmental Toxicology and Chemistry (SETAC) formed the Life Cycle Initiative "Towards a Life Cycle Sustainably Assessment- Making informed choices on products" 2011 at 2.

²³⁰ Andersson, K., Eide, M., Lundqvist, & Mattsson, B. 'The feasibility of including sustainability in LCA for product development' (1998) 6 *Journal of Cleaner Production* 289.

²³¹ Fava J "Life Cycle Initiative: A joint UNEP/SETAC Partnership to Advance Life Cycle Economy" as part of UNEP's Seminar on Cleaner Production 2002.

problem of distinguishing between CFGs and other products would be simplified. More specifically, the LCSA would allow for CFGs that not only assist in mitigating climate change but that were produced in environmentally friendly manners to be distinguished from other similar yet environmentally detrimental products.

Chapter 6

Conclusion

The interface between trade law and climate change is highly complex. The proposal to liberalise trade in CFGs through a SETA-type agreement has been a positive shift towards utilising trade to harness climate change mitigation benefits. As has been illustrated, this proposal does face an array of issues if concluded under the GATT framework. The principle of non-discrimination resonates throughout the structure of the GATT and measures taken by Members of the SETA-type agreement will evidently contravene the non-discrimination rules in Articles I and III of the GATT. The GATT case law has illustrated that the panel and the Appellate Body have been prone to adopting a very literal approach to interpreting these rules and have been hesitant in incorporating non-trade issues such as environmental protection in their considerations. The debate surrounding the use of PPMs in the *like product* analysis is still regarded as contentious, especially with regards to non-product related PPMs. There is, however, no binding *like product* test and each case has reiterated that the determination should be made on a case-by-case basis. Even if it is determined that non-product related PPMs should not be incorporated in the analysis, there is still the possibility of justifying the contravention of the GATT obligations under the Article XX exceptions. There is also the emergence of the Life Cycle Sustainability Assessment and the contention surrounding the incorporation thereof in the *like product* analysis. If the importance of incorporating the LCSA is recognised then the scope of goods that are considered truly CFGs may be narrowed. Although the establishment of a SETA-type agreement and the implementation thereof does face several obstacles, the solutions suggested could be a step towards overcoming these obstacles.

Bibliography

PRIMARY SOURCES

Agreements:

Agreement on Technical Barriers to Trade, 1868 U.N.T.S. 120.

General Agreement on Tariffs and Trade 1994 (GATT 1994), 1867 U.N.T.S. 187.

Marrakesh Agreement Establishing the World Trade Organization, 1867 U.N.T.S. 154.

Case law

Panel Reports

Belgian Family Allowances, adopted 7 November 1952, BISD 1S/59.

Canada- Certain Measures Affecting the Automobile Industry, adopted on February 11 2000, WT/DS/139/R.

Indonesia- Certain Measures Affecting the Automobile Industry, adopted on July 2 1998, WT/DS54/R.

Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes, DS10/R, adopted 7 November 1990, BISD 37S/200.

United States – Measures Affecting Alcoholic and Malt Beverages, DS23/R, adopted 19 June 1992, BISD 39S/206.

United States – Restrictions on Imports of Tuna, DS21/R, DS21/R, 3 September 1991, unadopted, BISD 39S/155.

United States – Restrictions on Imports of Tuna, DS29/R, 16 June 1994, unadopted.

United States – Taxes on Automobiles, DS31/R, 11 October 1994, unadopted.

United States – Taxes on Petroleum and Certain Imported Substances, L/6175, adopted 17 June 1987, BISD 34S/136.

Appellate Body Reports

Brazil – Measures Affecting Imports of Retreaded Tyres, WT/DS332/AB/R, adopted 17 December 2007, DSR 2007:IV.

European Communities – Measures Affecting Asbestos and Asbestos-Containing Products, WT/DS135/AB/R, adopted 5 April 2001, DSR 2001:VII.

Japan – Taxes on Alcoholic Beverages, WT/DS8/AB/R, WT/DS10/AB/R, WT/DS11/AB/R, adopted 1 November 1996, DSR 1996:I.

Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef, WT/DS 161, Appellate Body and Panel Report adopted on 10 January 2001.

United States – Import Prohibition of Certain Shrimp and Shrimp Products, WT/DS58/AB/R, adopted 6 November 1998, DSR 1998:VII.

United States – Standards for Reformulated and Conventional Gasoline, WT/DS2/AB/R, adopted 20 May 1996, DSR 1996:I.

SECONDARY SOURCES

Ancharaz V 'Can the Doha round be saved' in *The future and the WTO: Confronting the challenges* (2012) ICTSD Programme on Global Economic Policy and Institutions 103.

Andersson, K., Eide, M., Lundqvist, & Mattsson, B. 'The feasibility of including sustainability in LCA for product development' (1998) 6 *Journal of Cleaner Production* 289.

Antweiler, W., Copeland, B.R. and Taylor, M.S. (2001) "Is Free Trade Good for the Environment?" *American Economic Review* 91:4, pp. 877-908.

Ballhorn, R "The role of government and policy in sustainable development" 2005 *McGill International Sustainable Development and Policy* at 1.

Bianchi A, "The Impact of International Trade Law on Environmental Law and Process" in Francioni F *Environment, Human Rights and the Limits of Free Trade* 2001 Hart Publishing Oregon 134.

Biermann *Global Climate Governance Beyond 2012: Architecture, Agency and Adaptation* 87.

Brewer *The Trade and Climate Change Joint Agenda*

Booyesen, H *Principles of International Trade law as a Monistic System* 1ed (2003) at 224.

Bosselmann, K 'Strong and Weak Sustainable Development: Making Differences in the Design of Law' (2006) 13 *SAJELP* 39.

Bronckers M, McNelis N, Rethinking the 'like product' definition in WTO law: Anti-dumping an environmental protection' in *Regulatory barriers and the principle of non-discrimination in World Trade Law* (Thomas Xottier & Paetros Mavroidis eds. (2000) 348-385.

Brown, C, P "Participation in WTO dispute settlement: Complainants, interested parties, and free riders." *The World Bank Economic Review* 19, no. 2 (2005): 287-310.

Brewer, T.L "The technology agenda for international climate change policy: A taxonomy for structuring analyses and negotiations" in *Background paper for European Climate Platform seminar on 'Strategic aspects of technology for the UNFCCC and climate change debate: The Post-Bali technology agenda'* 8.

Carpentier C L "Environmental Goods and Services in the World Trade Organization" 2005 *The Journal of Environment and Development* 225.

Cline, W.R. "Doha Can Achieve Much More than Skeptics Expect," *Finance and Development*. (March 2005): 22-23.

Charlton A and Stiglitz J 'A development-friendly prioritisation of Doha Round proposals' 2005 Blackwell Publishing Ltd 295.

Charnovitz, S. 'Solving the Production and Processing Methods (PPMs) Puzzle' in Kevin P. Gallagher & Jacob Werksman (ed) *The Earthscan Reader on International Trade & Sustainable Development* (2002).

Charnovitz, S. 'The Law of Environmental "PPMs" in the WTO: Debunking the Myth of Illegality' (2002) 27 *Yale Journal of International Law* 59.

Cho S, *Free Markets and Social Regulation: A reform agenda of the global trading system* Kluwer Law International The Hague (2003).

Claro E, Nicolas L, "Trade in Environmental Goods and Services and Sustainable Development: Domestic Considerations and Strategies for WTO Negotiation" ICTSD Environmental Goods and Services Series, Policy Discussion Paper. Geneva 15.

Collier, P. *Why the WTO is Deadlocked and What Can Be Done About It*, 5.

Curran, M.A. Ed. 2012. *Life Cycle Assessment Handbook: A Guide for Environmentally Sustainable Products*. United States of America: Scrivener Publishing LLC. 15-42.

Fava J "Life Cycle Initiative: A joint UNEP/SETAC Partnership to Advance Life Cycle Economy" as part of UNEP's Seminar on Cleaner Production 2002.

Francioni F 'Environment, Human Rights and the Limits of Free Trade' 2001 Hart Publishing Oregon 15.

French, D. *International law and policy of sustainable development* (2005).

Gentile, D, A. 'International Trade and the Environment: What is the role of the WTO?' (2010) 20 *Fordham Environmental Law Review* 197 at 201.

Grossman, G.M. and Krueger, A.B. (1993), "Environmental Impacts of a North American Free Trade Agreement", in Garber, P.M. (ed.), *The US-Mexico Free Trade Agreement*, MIT Press, Cambridge, MA, pp. 13-56.

Hamway, R M., "Environmental Goods: Where Do the Dynamic Trade. Opportunities for Developing Countries Lie?" in *Cen2Eco Working Paper*. Geneva: Centre for Economic and Ecological Studies.

Hartman, S, "The WTO, the Doha Round Impasse, PTAs, and FTAs/RTAs." *International Trade Journal* 27, no. 5 (November 2013): 411-430. Business Source Premier, EBSCOhost.

Hoekman, B, M., and Michel M. Kostecki. *The political economy of the world trading system: the WTO and beyond*. Oxford University Press, 2009.

Howse, R, Regan, D 'The Product/Process Distinction: An Illusory Basis for Disciplining 'Unilateralism' in Trade Policy' (2000) 11 *EJIL* 249.

Hudec E "The Product-Process Doctrine in GATT/WTO Jurisprudence in New Directions" in *International Economic Law: Essays in honour of John.H.Jackson* (Marco Bronckers & Reinhard Quick eds 2000) at 187.

IPCC, 2013. *Climate Change 2013: The Physical Science Basis. Contribution of Working Group I to the Fifth Assessment Report of the Intergovern-*, Cambridge: Cambridge University Press.

Ismail, F "Is the Doha Round Dead? What is the Way Forward?." *World Economics* 13, no. 3 (July 2012): 143-169. Business Source Premier.

Jackson J *The Jurisprudence of GATT and the WTO: Insights on treaty law and economic relations* (2000) Cambridge University Press United Kingdom 57.

Jackson, J H., Hudec, R and Davis, D "The Role and Effectiveness of the WTO Dispute Settlement Mechanism [with Comments and Discussion]." In *Brookings Trade Forum*, pp. 179-236. Brookings Institution Press, 2000.

Kammen "Putting Renewables to Work: How many jobs can the clean energy industry generate?" in *Renewable and Appropriate Energy Laboratory Report* (2004) 12.

Kennedy, M. 'Legal Options for a Sustainable Energy Trade Agreement' (2012). *ICTSD Global Platform on Climate Change, Trade and Sustainable Energy*.

Kowalski, K, Sigrid S, Madlener R, and Omann I. "Sustainable energy futures: Methodological challenges in combining scenarios and participatory multi-criteria analysis." *European Journal of Operational Research* 197, no. 3 (2009): 1063-1074.

Kruse, R 'Process and Production Methods and Burden of Proof: A procedure limitation on the 'like' products debate' (2013) 16 *International Trade & Business Law Review* 377.

Lewis, J. 'Emerging Conflicts in Renewable Energy Policy and International Trade Law.' (2012). Working Paper prepared for the Centre for Resource Solutions and the Energy Foundation China Sustainable Energy Program.

Managi, S., Hibiki, A. and Tsurumi, T. (2008), "Does Trade Liberalization Reduce Pollution Emissions, Research Institute of Economy, Trade and Industry (RIETI) Discussion Paper Series 08-E-013.

Matsushita, M., Schoenbaum, T. & Mavroidis, P. *World Trade Organization Law, Practice, and Policy* (2003).

Mendoza M R 'Toward plurilateral plus agreements' in *The future and the WTO: Confronting the challenges* (2012) ICTSD Programme on Global Economic Policy and Institutions 102.

Montini, M 'The Necessity Principle as an Instrument to Balance Trade and the Protection of the Environment' in Francesco Francioni (ed) *Environment, Human Rights and International Trade* (2001) Ch 6.

Mytelk L, "Technology Transfer Issues in Environmental Goods and Services: An Illustrative Analysis of Sectors Relevant to Air-pollution and Renewable Energy" in *ICTSD Trade and Environment Series Issue Paper No. 6*. Geneva 23.

Peters, G.P. and Hertwich, E.G. (2008a), "CO2 Embodied in International Trade with Implications for Global Climate Policy", *Environmental Science & Technology* 42:5, pp. 1401-1407.

Ruppel, O. C. (2008). Third-generation human rights and the protection of the environment in Namibia. *Human rights and the rule of law in Namibia*. Windhoek: Macmillan Education Namibia, 101-120.

Sands P and Peel J *Principles of International Environmental Law* 3ed 808.

Subedi, S P 'The road from Doha: the issues for the development round of the WTO and the future of international trade' 2003 ICLQ 52 426.

Stillwell E "Advancing the environmental goods negotiations: Options and opportunities" 57.

Tamiotti L "Climate change and trade: a report by the United Nations Environment Programme and the World Trade Organization" 2009 2.

Tsai E "Like is a four-letter word- GATT Article III's like product conundrum" 1999 Berkeley Journal of International Law 26-60.

VikjlyaeV A "Environmental Goods and Services: defining negotiations or negotiating definitions?" in *Trade and Environment Review* 2003 35.

Weber, Rolf H. "DIGITAL TRADE IN WTO-LAW--TAKING STOCK AND LOOKING AHEAD." *Asian Journal of WTO & International Health Law & Policy*5, no. 1 (2010).

Weiss E *Reconciling Environment and Trade* (2008) Martinus Nijhoff Publishers The Netherlands.

Wilbanks, T.J. and Sathaye, J. (2003), "Integrating mitigation and adaptation as possible responses to global climate change" *Environment* 45:5, pp. 28-38.

Wolfe, R. (2009). The WTO Single Undertaking as Negotiating Technique and Constitutive Metaphor. *Journal of International Economic Law*, 12(4), 835-858.

Wilbanks, T.J. and Sathaye, J. (2003), "Integrating mitigation and adaptation as possible responses to global climate change" *Environment* 45:5, pp. 28-38.

REPORTS

Report of the Working Party on Border Tax Adjustments, BISD 18S/97.

UNEP/SETAC Life Cycle Initiative 'Towards a Life Cycle Sustainability Assessment- Making informed choices on products' (2011).

World Commission on Environment and Development, *Our Common Future* (1987).

United Nations Environment Programme and the Society of Environmental Toxicology and Chemistry (SETAC) formed the Life Cycle Initiative "Towards a Life Cycle Sustainably Assessment- Making informed choices on products" 2011.