Copenhagen Business School

CM(jur.)

Master's Thesis

12 June 2014

Climate Change and the World Trade Organization

- An enquiry into the possibility of invoking trade restrictions as a response to non-compliance with the Kyoto Protocol

Supervisors

Henrik Andersen (Law)

Kalle Rose (Economy)

Written by

Louise Lauritzen

Number of Character: (Front Page, Abstract,
Table of Contents, Bibliography and Appendix *not* included) 173,613
= 76,31 pages

Abstract

Empirical studies reveal that several member states of the Kyoto Protocol do not comply with their obligations to reduce their respective levels of greenhouse gas emissions. Criticism suggests that the compliance mechanism of the Kyoto Protocol is not effective in creating sufficient incentives for its member states to comply. The lack of an ultimate enforcement mechanism international law might have a negative impact on the behaviours of the member states. However, if one takes a look at the World Trade Organization, international relations scholars and trade experts agree that the compliance system of WTO has proven successful – even though it operates under the same preconditions as the UN does. The question is raised if and possible how the WTO and the UN, and their respective regulations, can help each other out as one encounters gaps or weak spots. Given the fact that the dispute settlement system of the WTO is successful in creating sufficient incentives for its member states to comply with their obligations as prescribed in the agreements covered by the WTO, I seek to analyse if one member state of the WTO and the Kyoto Protocol can lawfully restrict trade with a fellow member state in case of the latter's non-compliance with the Kyoto Protocol by means of invoking Article XX of the GATT.

The analysis proceeds in an economic analysis that addresses the economic incentives in relation to the Kyoto Protocol and in relation to the interaction between the WTO and the UN as described above. The economic analysis is followed by a legal analysis that examines, primarily through the judicial practice of WTO, to what extent the interaction between the WTO and the UN is possible as of today. I eventually advance a hypothesis that is prematurely claimed to constitute the lowest common denominator needed in order to render the interaction between WTO and UN possible in the future. Such common denominator, I argue, is comprised of the fact that the WTO and the UN are, or transform into, constitutional democracies supporting the common rule of international law, the empowerment of citizens as well as common substantive virtues. Finally the interaction between WTO and the UN is discussed in relation to the Kaldor-Hicks criterion.

TABLE OF CONTENTS

CHAPTER 1

1.1 Introduction

> '(…) it is clear that we will greatly increase human misery if we do not, during the immediate future, assume that the world available to the terrestrial human population is finite. "Space" is no escape'.[1]

Stemming from the article 'Tragedy of the Commons', published in the journal Science, this quotation is nearly fifty years old. The American author and ecologist Garrett Hardin obviously had a rather accurate outlook on the future. Hardin claimed essentially - and contrary to Adam Smith's 'invisible hand' – that if each individual acts according to his own short-term interest, ultimately it will give rise to some depletion of the Earth's commons and, hence, human misery. Indeed, the current global situation comprises a complicated picture depicting i.a. unequivocal heating of the Earth's climatic system capable of inflicting serious harm on both humans and nature. Climate change is already causing thousands of excess deaths annually. It was estimated to have caused at least 0.2 % of all deaths that occurred during the year 2004. In that year alone 10.4 million children under five years of age died.[2] The number indicates how many lives are at stake. This is an unnecessary number of dead mothers and fathers, daughters, sons, sisters and brothers etc.! Surely, I must say, we now find ourselves in the exact situation of human misery of which Hardin spoke: flagrant overexploitation of the natural resources; for example the excessive emissions of CO^2 into the atmosphere is just one factor resulting in global warming and the fatal consequences faced by the Earth. So, we find ourselves in a mess – a global mess, the tidying of which needs international collective resolution. Legally, we find ourselves in the realm of international law, which so far has also proven to be a rather tortuous affair. In pace with the increasing globalisation, the rising of a variety of international organisations, each with individual aims, and the states' continuous wish for greater amounts of self-determination, the plot thickens. And given that no international government exists, the tangled threads of the plot do not easily unravel.

---

[1] Hardin (1968) p. 1243
[2] *Ibid.* p. 28

One of the areas of international environmental and economic law that should be subject to further debate is compliance with the Kyoto Protocol. The Kyoto Protocol emerged under the auspices of the United Nations and its Framework Convention on Climate Change.[3] It pursues the objective of stabilising the concentrations of greenhouse gases, mainly CO^2, in the atmosphere at a level that would prevent dangerous anthropogenic interference with the climate system.[4] The Kyoto Protocol constitutes an important legal institution in the pursuit of putting global warming and, hence, some of the Hardinian misery to a stop.

Unfortunately, empirical studies suggest that many of the parties to the Kyoto Protocol do not fully (if at all) comply with the requirements of reducing their respective levels of greenhouse gas emissions,[5] even though they agreed to do so themselves. And this is where the lack of an international government bites our asses: We want a liveable climatic system, but we do not respectfully comply with the restrictions that would lead us thereto, even though it is supported by scientific proof. We simply do not comply. Why? Surely, a major reason for non-compliance is the missing possibility to enforce compliance. If compliance is associated with higher short-term costs than non-compliance, and furthermore cannot be enforced, then the member states might not suffer any negative economic consequences domestically when choosing not to comply; hence, the economic self-interest of the states takes over. Such economic benefits, however, do not last on a long-term basis.

If we take a look at the World Trade Organization, which regulates international trade, international relations scholars as well as trade experts agree that the compliance system of the WTO has proven successful – even though it operates under the same preconditions and with the same impediments in the international field as the UN; i.e. ultimately, no authoritative enforcement mechanism exists. Such facts take part in raising the question of whether two such greatly influential international organisations as the WTO and the UN, and their respective regulations, can help each other out, as one encounters gaps or weak spot in its functioning. Such interaction, or cooperation, between the organisations demands more than mere coexistence. Given that the dispute settlement system of the WTO is successful in creating sufficient incentives for its member states to comply with their obligations as prescribed in the agreements covered by

[3] United Nations Framework Convention on Climate Change (1992)
[4] UNFCCC Art. 2
[5] See Appendix I

the WTO, listed in Article 2 of the WTO Agreement, I wish to examine if the WTO might assist the UN in creating incentives for the member states to comply with their respective obligations as set forth in the Kyoto Protocol. This might be possible by allowing the states which are both members of the WTO and the Kyoto Protocol to restrict trade with those fellow member states which do not comply with their obligations under the Kyoto Protocol. In order for such trade restrictions to be lawful – which they per definition are not – they need to fall under the scope of the general exceptions contained in Article XX of the GATT. Such 'cooperation' between the WTO and the UN is throughout this thesis denoted the *interaction between the WTO and the UN*.

1.2 Problem Area

Given the fact that the dispute settlement system of the WTO is successful in creating sufficient incentives for its member states to comply with their obligations as prescribed in the WTO-covered agreements, it might assist the UN in creating incentives for the member states to comply with their respective obligations as set forth in the Kyoto Protocol.

1.3 Research Questions

In order to fulfill the purpose of this thesis I commit myself to answering the following research questions.

1.3.1 Integrated Question

- *Under which prerequisites does the possibility for a member state of both the WTO and the Kyoto Protocol to restrict trade with a fellow member state in case of the latter's non-compliance with the Kyoto Protocol constitute a legitimate measure in accordance with Article XX of the GATT?*

In order to be able to answer the overriding research question I shall answer two sub-questions:

1.3.2 Economic Sub-question

- *To what extent does the Kyoto Protocol, by itself, induce its member states to comply with their respective obligations pursuant to the Kyoto Protocol by creating an economic incentive, and would the interaction between the WTO and the UN affect such an economic incentive?*

1.3.3 Legal Sub-question

- *At present, to what extent is it possible for a member state of both the WTO and the Kyoto Protocol to adopt regulations according to which the state in question can restrict trade with a fellow member state due to the latter's non-compliance with the Kyoto Protocol, arguing that such regulations constitute a lawful measure pursuant to Article XX of the GATT?*

1.4 Delimitation

The international regulation of climate change induces numerous problems. The Kyoto Protocol is just one legal instrument in an abstruse legal system seeking to overpower the scientifically alleged climatic circumstances - even the Kyoto Protocol, by itself, addresses different problems employing different mechanisms.[6] This thesis, however, shall not address in particular any of these mechanisms; instead it will address the Kyoto Protocol and its respective mechanisms as one unit.

1.5 Purpose and Point of View

The purpose of this thesis is to participate in the creation of a narrative about how we address and respond to climate change by means of legal and economic instruments. The thesis takes as its point of departure empirical studies that suggest two tendencies:

1. The dispute settlement system of the WTO seems to be successful in making the member states of the WTO comply with their obligations under the WTO-covered agreements.
2. The compliance mechanism connected to the Kyoto Protocol is much less successful: A fair deal of the member states of the Kyoto Protocol fail to comply with their legal obligations pursuant to the provisions of the Kyoto Protocol.

The purpose of this thesis is to determine why the parties to the Kyoto Protocol do not comply with their obligations and, depending on the findings of the respective chapters, if the WTO might be helpful in creating an incentive for the member states of the Kyoto Protocol to comply with their obligations by means of invoking trade restrictions as a lawful measure pursuant to Article XX of the GATT in case of a fellow member state's non-compliance with the Kyoto Protocol. Ultimately, this is about the interrelationship between two international organisations, and if and how the respective legal frameworks coexist and cooperate today and in the future.

[6] Joint Implementation, Clean Development, Emissions Trading

An underlying assumption of this thesis is that addressing and responding to climate change is pivotal to everyone residing on the Earth today and in the future. In the economic analysis I put myself in the place of the states in order to explain their rational conduct, but throughout the thesis I employ a point of view that sympathises with a possible development that might comprise a basis for taking the climate into a higher degree of consideration. The fact that a healthy climate constitutes a 'good' for *the international society* - without any exemptions - is implicitly given.

1.6 Structure

This thesis proceeds in three main steps. Whereas the economic analysis is conducted in Chapter 2, the legal analysis is contained in Chapter 3. Chapter 4 contains the integrated analysis aiming to compare the respective findings from the economic and legal analyses, respectively. Finally, Chapter 5 is occupied with the final conclusion.

The economic analysis in Chapter 2 is mainly concerned with spotting economic incentives. Initially I invoke the theory of the Tragedy of the Commons in order to ascertain the special nature characterising the atmosphere, which is the 'good' at stake (or at risk) in connection with non-compliance with the Kyoto Protocol. Accordingly, using game theoretical models such as the Prisoners' Dilemma and the Grim Trigger Strategy I attempt to map the economic incentives that the member states of the Kyoto Protocol might - or might not - have to comply with their respective obligations pursuant to the Kyoto Protocol. And I examine if the member states would be expected to comply with the Kyoto Protocol if, hypothetically, the interaction between the WTO and the UN was rendered possible.

The legal analysis in Chapter 3 is concerned with the application and interpretation of Article XX of the GATT. Seeking to clarify the scope of the sub-paragraphs as well as the introductory clause of Article XX I advance two broadly defined examples of trade restrictions invoked by a member state that is both a member of the WTO and the Kyoto Protocol against a fellow member state, and I analyse to what extent such measures would fall under the scope of Article XX. Throughout the legal analysis I draw heavily on the judicial practice of the WTO, including international treaty interpretation.

The findings from the legal and economic analyses, respectively, come together in Chapter 4. Together they comprise the basis for taking the thesis to the next level. Initially I advance a

hypothesis that I prematurely claim constitutes the lowest common denominator needed to render the interaction between the WTO and the UN possible. Its four parts are explained, linked to each other and their contexts. Accordingly, I present the Kaldor-Hicks criterion in order to illustrate how such a common denominator is a prerequisite for the interaction between the WTO and the UN to be socially efficient. Chapter 5 is mainly devoted to the final conclusion.

1.7 Theory and Methodology

The Statute of the International Court of Justice[7] provides a list of the respective sources of law that the court may put into play settling disputes. These amount to international conventions, international custom, general principles of law, judicial decisions and the teachings of the most highly qualified publicists.[8]

International conventions like the UNFCCC[9] - the convention to which the Kyoto Protocol is attached - and the WTO Agreement[10] are both relevant examples of such international conventions that I refer to continuously in the respective analyses. Likewise, I apply law that derives from the substantial uniformity of practice among a plurality of states.[11] Such law is referred to as international customary law.

General principles of law primarily develop when some gaps or weak spots need to be filled or supported. The existence of such is omnipresent, meaning that they apply to the conduct and interpretation of all international law.[12] I apply i.a. the principle of proportionality and the principle of effectiveness in my legal analysis.

To a great extent this thesis addresses judicial decisions delivered by panels and the Appellate Body of the Dispute Settlement Body of the WTO. Although the judicial decisions comprise subsidiary sources of law, they constitute an important asset in the development of international law in general and to this thesis specifically. They constitute a collection of considerations of qualified members of courts and tribunals taking into account all relevant facts and arguments in the specific cases, thereby creating some legally authoritative outcome that accounts for a source of international law. Also, throughout this thesis I apply articles by highly qualified publicists, who

[7] Charter of the United Nations and Statute of the International Court of Justice (1945)
[8] Statute of the ICJ Art. 38
[9] United Nations Framework Convention on Climate Change (1992)
[10] Agreement Establishing the World Trade Organization (1994)
[11] Aust (2010) p. 6
[12] *Ibid*. p. 8

provide great insight and considerations, thereby facilitating the preparation of an answer to the research questions.

In order to conduct my legal analysis I resort to treaty interpretation. Various panels and the Appellate Body have indeed applied the Vienna Convention of Law of Treaties (further denoted the *VCLT*) as a guide for interpreting the WTO-covered agreements, including the GATT.[13] They are explicitly required to do so pursuant to Article 3:2 according to which the WTO-covered agreements must be interpreted consistently with customary rules of interpretation of public international law. Articles 31 and 32 are generally recognised as being a codification of international customary law, which consequently means that they apply throughout international law, and not only to the law of those states that are parties to the VCLT.[14]

In the economic chapter of this thesis I bring incentives theory into the spotlight. I depart from the theory of the Tragedy of the Commons as it fits so well with the problematic of this thesis: the overexploitation of common property resources. Accordingly, game theory will take the lead, deductively applied in order to illustrate the rationality of the states of the Kyoto Protocol, and how such rationality affects their choice of strategy. Game theory is consistently applied throughout the economic analysis, as are the simple model, the grim trigger strategy and the extended grim trigger strategy. Setting up the games I employ theory from law and economics. I seek to illustrate by means of economic incentives theory how a certain legal rule might influence on the strategy of the member states involved. This will provide us with knowledge on how the states would behave if given the possibility to restrict trade with a fellow member state.

I apply the findings from the legal and economic analyses to propose circumstances which are needed in order for the interaction between the WTO and the UN to be possible, and accordingly explain how the emergence of such circumstances is a prerequisite for the interaction between the WTO and the UN to be socially efficient pursuant to the Kaldor-Hicks criterion. I present the theory of Kaldor-Hicks efficiency in Chapter 5.

[13] Cameron and Gray (2001) p. 252
[14] Cameron and Gray (2001) p. 254

CHAPTER 2: ECONOMIC ANALYSIS

2.1 Introduction

The international arena is an anarchic world. No international government exists. Therefore, states are essentially sovereign. This means that the enforcement of international treaties and other international agreements is simply not possible. No world police will turn up finger wagging on our doorsteps whenever we fail to comply with treaty obligations. It has already been stated that the empirical studies have evidenced the fact that member states of the Kyoto Protocol often do not abide by their respective reduction commitments. Given the anarchic world, this does not seem entirely surprising: If no one can enforce the reduction commitments, then why bother to comply with them?

Compliance is per definition considered to be more costly than non-compliance. Article 2 of the Kyoto Protocol prescribes that states included in Annex I, the industrialised states, are compelled to implement and/or further develop policies and measures in accordance with their respective national circumstances in achieving the quantified reduction commitments in order to promote sustainable development. The paragraph then offers a list containing eight examples of such policies and measures, which comprise everything from the enhancement of energy efficiency in relevant sectors of the national economy, promotion of sustainable forms of agriculture, research on and promotion of development and increased use of new and renewable forms of energy and carbon dioxide sequestration technologies, to the limitation and/or reduction of methane emissions through recovery and use in waste management as well as in the production, transport and distribution of energy.[15] Only half of the examples are mentioned here. They do, however, tend to give an idea of the magnitude and, hence, associated costs of these policies and measures. It should also be mentioned that the use of the term 'state' in immediate connection with compliance is a delimited term. The term comprises all sorts of actors within the state that can possibly contribute to reaching the objective of the Kyoto Protocol. It includes state and non-state actors, corporations etc. However, the states are eventually the responsible subjects of law, which explains the continuous application of the term 'state' throughout this thesis even though it encompasses so much more than what is initially implied.

[15] Kyoto Protocol Art. 2:1(i)-(viii)

Let us return to the empirical studies mentioned above. True, non-compliance with the Kyoto Protocol has indeed been evidenced. However, empirical studies elsewhere reveal that treaties and international agreements between states are often respected and complied with. So what does that tell us? That states sometimes abide by their respective international commitments and sometimes they do not? How do the states decide which commitments to comply with? One might think that the immense importance of the climate would create enough incentive for them to comply with the Kyoto Protocol, but this is not the case. It is time to take a look at what triggers non-compliance with the Kyoto Protocol and possibly how such triggers might be reverted.

2.2 The Tragedy of the Commons

First of all, the whole problematic surrounding the Kyoto Protocol is that it is part of a specific area that deals with *common property resources*. Common property resources – *commons* – constitute a field of resources that everybody has equal access to and that everybody 'owns'. The characteristic of such commonly owned resources is that the more we spend in the present, the less is accessible in the future. And this is eventually the reason why the usage of commons creates a problem. The commons problem would not even be a problem if it was not for commons' ability to deplete. The atmosphere is a natural resource that comprises such a common: Everybody (or nobody) owns the air that we breathe and that we pollute with CO^2 through a variety of dirty production methods etc. The amount of pollution we produce today will be equally subtracted from the amount available in the future. The characteristics of the common of our atmosphere are therefore:

- Access to everyone: It does not make sense to restrict access to a limited amount of people.
- Resource depletability: The more (intensively) people use the resource in the present, the less there is of the resource in the future.[16]

It should be noted that the aim is not to bring pollution of the atmosphere to a full stop; not that it would not be desirable. It is simply not realistic. The atmosphere can of course take some amount of pollution without fatal consequences, i.e. the usage of this common is not banned. The problem arises, however, as the pollution increases to a point where regeneration of a healthy atmosphere is no longer possible. Ideally we therefore have to place ourselves in a situation where our amount

[16] Dutta (1999) pp. 91-92

of pollution allows for regeneration. And so the question is: What constitutes the 'best' amount of pollution?[17]

Normally the usage of commons gives rise to two sources of externalities: Current externalities and future externalities.

The current externalities represent those externalities that are imposed today: A person's usage of the commons today might affect the benefits of another person's usage today. The future externalities represent the externalities that are imposed in the future: A person's usage of the common today might affect the benefits of another person's usage tomorrow.[18]

As regards the pollution of the atmosphere, only the question of *future* externalities is imperative. The greenhouse gases, especially CO^2, that we pour into the air can be captured in the atmosphere for periods of up to 200 years. This means that the amount of pollution that we bring about today holds devastating implications for our future generations.

Consequently, this will lead to overexploitation of the commons today. Recall the Hardinian misery mentioned in the introduction to Chapter 1. Overexploitation has already resulted in an unnecessary heap of dead bodies: the ultimate victims of overexploitation of the commons. Hardin explained this phenomenon with the theory of *the Tragedy of the Commons.* Initially, people are rational beings who act so as to maximise personal utility. Hardin uses an open pasture example to illustrate his theory. The pasture is open to all and the herdsmen will all try to put as many cattle on the pasture as possible. This will work well for some time, given that wars, diseases etc. keep the number of men and cattle below what the pasture can carry. However, at one point the social optimum will be reached. The social optimum is the point where adding one more cattle does not bring about any gains, but, on the contrary, imposes more costs than the gains can compensate for. And so, at this point 'the inherent logic of the commons remorselessly generates tragedy'.[19] Why? Because the herdsmen are considered to be rational individuals. Their

[17] Dutta (1999) p. 92
[18] *Ibid.* p. 92
[19] Hardin (1968) p. 1244

endeavours are concentrated around their own individual utility, asking, 'What is the utility *to me* of adding one more animal to my herd?'[20]

Before going any further, let us convert the notion of the tragedy of the commons into the situation in focus: polluting the atmosphere. Although the cattle example is about *detracting* from a common, and the pollution of the atmosphere is an addition to a common, they represent identical problems: The atmosphere is open to all and the states try to gain as much as possible, i.e. they are considered rational individuals striving to maximise their respective utilities. Eventually the amount of greenhouse gases contained (and captured) in the atmosphere reaches its societal optimum, and the states will ask themselves, 'What is the utility *to me* of pouring one more ton of CO^2 into the atmosphere?'

Each state discovers that the cost associated with releasing polluting gases into the atmosphere is much less than the cost associated with purifying the gases before discharging them. The costs associated with releasing (without purifying) the gases are shared by all the member states of the Kyoto Protocol for which reason the rational state only holds a small fraction of the overall amount of costs, and so '(…) we are locked into a system of "fouling our own nest," so long as we behave only as independent, rational, free-enterprisers'.[21] Let us illustrate the states' endeavours for utility maximisation by deploying a simple model.

2.3 A Simple Model

The simple model serves to explain *the game* that states play when they have to choose their respective level of pollution as a reaction to what they conjecture about the amount of pollution of the other states. The respective levels of pollution will tell us whether or not the states are complying with their reduction commitments as set forth in the Kyoto Protocol. The game includes only two players: state 1 and state 2 (further denoted S1 and S2).

The atmosphere comprises the common of size $y > 0$. Also, it is a finite common, which in this context means that when there is no more of this common, it will be the end of the world. Of course, this is an oversimplification.

[20] *Ibid.* p. 1244
[21] *Ibid.* p. 1245

In the simple model the game has merely two periods. In each period each state has the opportunity to pollute a certain amount, c_1 or c_2, both of which constitute positive amounts. The sum of c_1 and c_2, however, does not exceed y, i.e. $(c_1 + c_2) \leq y$.

If the states pollute the entire atmosphere in period 1 by spending amounts c_1 and c_2, which equals y, then nothing remains for them to pollute in period 2. In other words, the world will come to an end at the end of the first period. However, if the states leave some amount of atmosphere, $y - (c_1 + c_2)$, for period 2, they can survive for two periods instead of one. By assuming that the states will leave some amount of atmosphere to pollute in the second period, it is assumed that they pollute the entire remainder of the atmosphere. It does not make sense for them to keep restraining their respective amounts of pollution. This ultimately means that in period 2 they each pollute amounts that equal $\frac{y - (c_1 + c_2)}{2}$.[22]

Keeping in mind that the states are rational individuals striving to maximise their respective utilities, the game proceeds as follows: S1 *draws* first. His utility will eventually depend on the amount that S2 decides to pollute, since their combined amount determines the amount of atmosphere that can be polluted in period 2. Given that the amount of pollution, c_1, that S1 emits provides him with the utility $\log c_1$, and given that S1 has a conjecture about the draw of S2, then S1 will maximise his utility by the following best response function in which c_2 denotes the amount that S1 believes S2 will pollute in period 2:[23]
Max c_1:

$$Max_{c_1} \log c_1 + \log \frac{y - (c_1 + c_2)}{2}$$

$$\log c_1 = \log\left(y - (c_1 + c_2)\right) - \log(2)$$

$$\frac{1}{c_1} = \frac{1}{y - (c_1 + c_2)}$$

$$c_1 = y - (c_1 + c_2)$$

$$c_1 = y - c_1 - c_2$$

[22] Dutta (1999) p. 93
[23] *Ibid.* p. 94

$$2c_1 = y - c_2$$

$$c_1 = \frac{y - c_2}{2}$$

$$R_1(c_2) = \frac{(y - c_2)}{2}$$

Solving in the same way for the best response function of S2 by maximising c_2, we get:
Max c_2:

$$R_2(c_1) = \frac{(y - c_1)}{2}$$

The functions arrive at the responses of S1 and S2, respectively, given the amounts, c_1 and c_2, that they believe the other state pollutes.[24] Now that we have the best response functions of the two states, we can derive the Nash Equilibrium.

2.3.1 The Nash Equilibrium

The best response functions represent the strategies with which the states perform *the best* given what they each conjecture about the other state's amount of pollution. The best response strategy does better than any other strategy against the supposed strategy of the other. Of course, the conjectures are only guesswork. However, if we assume that both guesses are correct, then we end up with a situation where no one would want to change what they had done. If, for instance, S1 guessed wrong and, hence, played a 'wrong response' strategy, then S2 would win the game, because S2 made a correct guess and was able to play his best response strategy against the wrongful guess of S1. In that case, S1 would want to alter his strategy.[25] Say that this does not happen, and that both states guess the right amount of pollution emitted by the other state, then no one could have done better and no one would want to change anything. Such a case represents a Nash equilibrium. It requires that two conditions are fulfilled:

- Each state plays a best response strategy against what they believe the other state does.
- The conjecture is correct.[26]

[24] Dutta (1999) p. 94
[25] Dutta (1999) pp. 63-64
[26] *Ibid.* p. 64

A Nash equilibrium is per definition a stable outcome of the game. When none of the states receive a higher payoff by altering their strategy, then why change anything?[27] In the simple model the Nash Equilibrium is found by substituting the best response functions into one another. It is given by:

$$c_1 = \frac{y - c_2}{2}$$

$$c_1 = \frac{y - \frac{y - c_1}{2}}{2}$$

$$2c_1 = y - \left(\frac{y - c_1}{2}\right)$$

$$4c_1 = 2y - \left(y - c_1\right)$$

$$4c_1 = 2y - y + c_1$$

$$4c_1 = y - c_1$$

$$3c_1 = y$$

$$c_1 = \frac{y}{3}$$

Naturally, the same is true for S2: $c_2 = \frac{y}{3}$

The Nash equilibrium in this simple model tells us that each state, when playing their respective best responses, given that their conjecture about the other state's amount of pollution is correct, will pollute $\frac{1}{3}$ of the atmosphere in the first period. When they both do so they leave only $\frac{1}{3}\left(= 1 - \left(\frac{1}{3} + \frac{1}{3}\right)\right)$ of the atmosphere to be polluted in the future second period. In the second period, therefore, each state will only pollute $\frac{1}{6}\left(= \frac{\left(\frac{1}{3}\right)}{2}\right)$ of the atmosphere.

This model is of course extremely simple. First of all, it presumes that the world will come to an end after two periods, when 'no atmosphere' can be polluted. The real-world scenario is of course completely different. True, the level of pollution will at some point reach irreversible and

[27] *Ibid.* p. 65

devastating heights, but we cannot say that one state pollutes this or that fraction of the atmosphere, after which another state pollutes a different fraction. When the commons constitute the atmosphere, we are not talking about commons from which the actors *in the game* subtract. It is commons that we add to. We add to the atmosphere polluting gases that terrorise its future use. However, the simple model is applied regardless of such facts, since it serves to explain how the states act in relation to one another. This is the main purpose of the model. One has to think of the atmosphere as some *thing* to consume (pollute), and when x fraction is polluted by one state, another state cannot pollute that self-same fraction (which of course diverges greatly from real life). The latter must pollute a non-polluted fraction of the residual atmosphere, which comprises 1 – x.

2.4 Social Optimum

Recall what was said earlier about the social optimum. The social optimum is the point where adding one more unit of pollution to the atmosphere does not bring about any gains, but, on the contrary, imposes more costs than the gains can compensate for. And so, at this point, the tragedy of the commons arises, since the states (the delimited notion) are considered to be rational individuals. This means that their endeavours are concentrated around their own individual utilities, asking, 'What is the utility *to me* of adding one more unit of pollution to the atmosphere?'

Given this definition it is crucial to the future that pollution of the atmosphere does not exceed an amount where regeneration is no longer an option. In other words, the states need to balance their amounts of pollution to a point where the costs do not exceed the gains. However, it was just established that states are rational individuals, who strive to maximise individual utilities. Therefore, the only way to create a model that illustrates socially optimal pollution is to assume that the states get together and simply agree on their respective levels of pollution. This is exactly what the states did with the Kyoto Protocol. They considered the horrible amounts and devastating effects of pollution and decided to write up an agreement that was supposed to regulate the amounts of pollution by imposing a quota system. The quota system was originally implemented in order to limit pollution from CO^2 and equivalent gases which were (and still are) poured into the atmosphere as a direct result of human activity. I will return to the quota system in Chapter 5.

The social optimum model is of course also, to some degree, simplified: Two states constitute an entire society (in this case the entire world) and they have only two periods to *play the game.* That being said, the social optimum model points to the amounts the states should pollute in the two periods in order to maximise the *aggregate* – as opposed to individual – utility. Converted into real life: the states got together to decide what each could pollute for the 'common good'.[28] The 'common good' emerges as the states collectively strive to maximise the aggregate utility.
Max c_1 c_2:

$$Max_{c_1 c_2} \log c_1 + \log c_2 + 2\log \frac{y - (c_1 + c_2)}{2}$$

In order to solve for the social optimum I initially write down the first-order conditions of c_1 and c_2, respectively.

First-order condition for c_1:

$$\log c_1 + 2\log \frac{y - (c_1 + c_2)}{2}$$

$$\log c_1 + 2\log\left(y - (c_1 + c_2)\right) - 2\log(2)$$

$$\frac{1}{c_1} = \frac{2}{y - (c_1 + c_2)}$$

$$\frac{1}{2c_1} = \frac{1}{y - (c_1 + c_2)}$$

$$2c_1 = y - (c_1 + c_2)$$

$$2c_1 = y - c_1 - c_2$$

$$3c_1 = y - c_2$$

$$c_1 = \frac{y - c_2}{3}$$

$$R_1(c_2) = \frac{y - c_2}{3}$$

Likewise, the first-order conditions for c_2 is:

[28] Dutta (1999) p. 95

$$R_2(c_1) = \frac{y - c_1}{3}$$

2.4.1 The Nash Equilibrium

The Nash Equilibrium in the social optimum model is the amount of c_1 and c_a that derives from their best response functions. As we know both best responses we can derive the specific amount of pollution of c_1 and c_a in the first period by substituting the best responses into each other. Note that S1 and S2 are assumed to be equally strong players and therefore pollute identical amounts.

$$c_1 = \frac{y - \left(\frac{y - c_1}{3}\right)}{3}$$

$$c_1 = \frac{y - \frac{y}{3} + \frac{c_1}{3}}{3}$$

$$c_1 = \frac{\frac{2}{3}y + \frac{c_1}{3}}{3}$$

$$3c_1 = \frac{2}{3}y + \frac{c_1}{3}$$

$$9c_1 = 2y + c_1$$

$$8c_1 = 2y$$

$$c_1 = \frac{2y}{8}$$

$$c_1 = \frac{y}{4}$$

Again, the same is true, as we solve for S2: $c_2 = \frac{y}{4}$

This means that S1 and S2 maximize their aggregate utility by polluting amounts that equal $\frac{1}{4}$ (as y = 1) in the first period. This is also the Nash Equilibrium for the social optimum model.

The social optimum model comes up with a result that differs from the one we got from applying the simple model. The simple model maximised the states' individual utilities, whereas the social optimum model maximises the states' aggregated utility. The simple model showed that the states (collectively) polluted $\frac{2}{3}$ of the atmosphere in the first period, leaving only the residual $\frac{1}{3}$ for the

second period. What the social optimum model now suggests is that this does not serve the 'common good', as the 'common good' prescribes that only $\frac{1}{4}$ should be polluted by each state in the first period, leaving a residual $\frac{1}{2}$ of the atmosphere for the second period. This is what the Kyoto Protocol strives towards: a balanced level of pollution that serves the 'common good'.

Unfortunately the Kyoto Protocol is not complied with, and therefore we end up where we started:

The atmosphere is a common. It is a finite good that everyone has access to and equally owns. The states and the populations 'occupied with' polluting the atmosphere are considered rational individuals, who act so as to maximise their individual utilities. This makes the states overexploit the common. That is, they pollute a lot today and leave a small fraction for the future generations to pollute, before the world will come to an end. When the states realised this, they eventually decided to gather around a big, round table to reach an agreement and thereby solve this problem. The states negotiated for a long time and finally came to an agreement (although many states decided not to become parties to the agreement due to the conditions under which they settled). The Kyoto Protocol *theoretically* represents the social optimum, i.e. it maximises the aggregate utility, as opposed to the individual utility. It regulates the optimal amount of pollution today and in the future period. However, the states operate in the international anarchic arena where no enforcement possibilities exist, and the states therefore manage to get away with not complying with the agreed reduction commitments as set forth in the Kyoto Protocol. And so the states have resumed acting according to their rational nature. And this is when tragedy hits. We are back where we started.

2.5 A Grim Trigger

So, the simple model and the social optimum model both failed to lead us anywhere. The simple model did, however, serve as an illustration of how the states act as rational individuals, as was the purpose of the models' application to this thesis. The result of this is that the states neither manage to take care of the commons (the atmosphere) nor comply with the reduction commitments. The social optimum model does hold in theory, for which reason the states agreed to the Kyoto Protocol. Its application in practice involves several obstacles, though, the primary one being the lack of a deterrent enforcement mechanism.

In order to enrich this thesis with something else than utter doomsday prophesies, let us brighten our minds a bit and investigate how the rational behaviour of states might be put into preferable good use. Doing so initially demands a quick run-through of the theory of prisoners' dilemma.

2.5.1 Prisoners' Dilemma

Generally, the game of prisoners' dilemma involves two players: prisoner 1 and prisoner 2 (further denoted P1 and P2) who both hold two possible moves: confess and not confess. The evidence of the crime committed by the prisoners is almost complete. If both confess to the crime, they both go to prison, and so the payoffs constitute (0,0). If, however, neither confesses to the crime, they both avoid prison, making the payoffs (5,5). Also, each prisoners knows that if he does not confess and the other prisoner does, then his non-confession will result in prison time, which yields a payoff of -2, whereas the confessing prisoner will be rewarded for confessing and gets no prison time, which eventually provides him with a payoff of 7:

P1/P2	Confess	Not Confess
Confess	0, 0	7, -2
Not Confess	-2, 7	5, 5

The simple game shows that the best outcome for both of them is to not confess, since (5,5) translates into no prison time and thereby a positive payoff. However, the parties have to choose their respective moves separately and, hence, do not know what the move of the other prisoner will be. Therefore, they eventually end up *not* confessing. Why? If P1 believes that P2 will not confess, it is better for P1 to confess, because in that case he will get a payoff of 7 instead of 5. And since he is only concerned with maximising his own utility, he is indifferent to the fact that his confession will render P2 some time in prison. The reverse situation is true for P2: If he believes that P1 will not confess, he will confess in order to maximise his payoff. Since both prisoners are aware of this, they both end up confessing, since this situation is the only one that does not impose an incentive to change strategies: If P1 confesses, the outcome for P2 of confessing (0) is

better than the outcome of not confessing (-2). Therefore, (confess, confess) is the only rational outcome of prisoners' dilemma.[29]

Converted into a situation of compliance vs. non-compliance with the Kyoto Protocol, the game still has two players: S1 and S2. They are both suspected of not complying with their respective reduction commitments as set forth in the Kyoto Protocol, and they both have two possible moves: compliance and non-compliance.

The payoffs are unchanged. And also in this game the states are only concerned with maximising their individual payoff. The matrix looks like this:

S1/S2	Not Comply	Comply
Not Comply	0, 0	7, -2
Comply	-2, 7	5, 5

In this situation the payoffs essentially build on gains from reducing the emissions of greenhouse gases. If, on the one hand, both S1 and S2 comply with their reduction commitments, they will most probably suffer some costs (new technology, green production methods etc.), but they will eventually benefit from the liveable climate. And so they will both receive a payoff of 5. If, on the other hand, they do not comply with their reduction commitments, they will not receive additional costs, but the worsening of the state of the atmosphere and the climate will be evident from the payoffs which are now 0. If S1 complies and S2 does not, then S1 suffers additional costs which he does not consider to be worthwhile. That is, if S1 makes an effort to comply in order to do good by the climate, then he considers that effort wasted, as S2 keeps emitting CO^2 unchangeably. And vice versa. Eventually they both end up not complying, since such strategy yields a payoff of 7 compared with the payoff of 5 they get from complying.

And so, the states end up not complying with their reduction commitments. This is the rational outcome of the game. Even though they are well aware of the fact that the climate suffers from non-compliance – this was why they agreed to become parties to the Kyoto Protocol in the first

[29] Dutta (1999) pp. 11-12

place – they choose not to comply, because this is the outcome that no one wants to change given the other states' non-compliance.

2.5.2 A Grim Trigger Strategy

That being said, it is time to move on to the grim trigger strategy. A grim trigger strategy is a strategy where both states *behave themselves* in order to reach the greater payoff associated with the situation in which they both comply with their reduction commitments. The matrix above just showed that the states end up not complying and therefore receive a smaller payoff (0, 0) compared to a situation of compliance (5, 5).

We need to ask ourselves how the states might reach the desired outcome of compliance. This is the purpose of the grim trigger strategy. It serves to explain the rationale behind reaching another outcome than the immediate Nash Equilibrium by introducing a *punishment phase*. The grim trigger strategy is applicable under the following conditions:

- There is a grim eternal punishment.
- The good behaviour of the states is infinitely desired.

Taking the payoffs in the matrix as an example the grim punishment constitutes the situation where none of the states comply with the Kyoto Protocol. Why? As illustrated above in the game of prisoners' dilemma the prisoners end up confessing, even though this is not the outcome that yields the greatest payoffs. However, this is the stable outcome. None of the states wish to change their draw. This is a fact, since this simple version of the game of prisoners' dilemma is a finitely repeated game.[30] The game might be played over and over again – the game is *repeated* – but the prisoners know that the game will end after t periods. And as long as they know this, each game renders identical outcomes, (confess, confess).[31]

The same thing goes for the game that is concerned with compliance vs. non-compliance with the Kyoto Protocol. The game is played over and over again. However, the Kyoto Protocol is constructed specifically to operate in *commitment periods*, which are explicitly defined time frames. The first commitment period began in 2008 and ended at the end of the year 2012. The

[30] Dutta (1999) p. 209
[31] *Ibid.* p. 230

second commitment period began in January 2013 and runs until the end of the year 2020. At the end of each commitment period the protocol is renegotiated and the states can opt out of the agreement. Theoretically, the game therefore ends when every commitment period expires. The game of compliance vs. non-compliance under the present architecture of the Kyoto Protocol, therefore, constitutes a finitely repeated game.

Let us investigate the implications of revoking the fixed periods in order to observe whether or not the states will act differently under conditions of reciprocity, that is, if the revocation of the commitment periods gives the states economic incentive to alter their actions. In such case the parties to the Kyoto Protocol do not know when the game will end. They know that they will interact with each other in the future, assuming that they cannot opt out of the agreement, which of course they can in practice. Under such conditions the states are playing an *infinitely repeated game*.

Still, we operate with the compliance vs. non-compliance matrix as set forth above. It holds the same payoffs as in the finitely repeated game. But changing the game from a finitely repeated game into an infinitely repeated one does have implications for the game:

The outcome of (non-compliance, non-compliance) – the Nash equilibrium of this game – now constitutes a grim punishment. That is, if the states begin the game by playing (compliance, compliance) they both receive a higher payoff than if neither complies. The states know this. However, if one of the states at any point in time decides *not* to comply, then the grim punishment is invoked: If S1 suddenly does not comply he will receive a payoff of 7 instead of 5 (which is basically the reason why he decides to change into non-compliance). To S2 this means that his payoff will drop from 5 to -2, since he is now doing all the work reducing the greenhouse gases in the atmosphere, which is considered to be a costly affair. This (also) makes S2 not comply with his reduction commitment, because by altering his strategy from compliance to non-compliance his payoff consequently increases from -2 to 0, which he, as a rational individual, obviously prefers. When the states end up in this situation (non-compliance, non-compliance) they will be there forever. No one will be able to trust the other to do good by the climate, and therefore the only

rational choice for them, *after* the opportunistic behaviour of non-complying, is to keep non-complying forever.[32]

Good behaviour of the states is indefinitely desired:

In order for the grim punishment to be credible the good behaviour of the states needs to be desired forever. If the good behaviour is *not* desired indefinitely the states would simply alter their strategies in order to avoid ending up with a payoff of -2, which is the lowest possible payoff one state can receive in the game. And so they end up not complying. If, however, the game is repeated indefinitely, the states realise that if they *behave well* by complying with their reduction commitments they will receive a greater payoff (5 instead of 0).

Of course, this requires that the total payoff associated with compliance is greater than the total payoff associated with non-compliance. By total payoff I refer to both present and future payoffs. The present payoff connected with compliance is what the states receive today, which is simply 5. The future payoff has to be discounted with a discount factor in order to adjust for how much the future action of compliance or non-compliance is worth today. In that case the discount factor related to compliance is inevitably positive, as complying with the reduction commitments today will not have an immediate effect, but it will definitely have a positive effect in the future. Therefore, action today will yield a positive return in the future.[33]

The total discounted payoff, S, of each state in *t* periods can therefore be summarised like this:

$$S = \pi_0 + \pi_1\delta + \pi_2\delta^2 + \pi_3\delta^3 + \ldots + \pi_t\delta^t$$

Since the payoff for compliance is 5 in every game, cf. the matrix, the total discounted payoffs for S1 and S2, respectively, are:

$$S = 5 + 5_1\delta + 5_2\delta^2 + 5_3\delta^3 + \ldots + 5_t\delta^t$$

[32] Dutta (1999) p. 229
[33] *Ibid.* p. 228

Let us assume that a payoff of 5 today is worth 5,5 tomorrow (in period 2). This eventually means that a payoff of 5 in the future is worth less than a payoff of 5 today. The payoff increases from 5 to 5,5, i.e. every unit of payoff [34] increases with 0,10 per unit. Therefore, the payoff of 5 in period 2 is only worth $\frac{1}{1{,}1} \cdot 5 = 4{,}5454$ today.

The discount factor equals $\frac{1}{1{,}1} = 0.9090$. It needs to be adjusted according to the period in question as indicated by the equation: $5 + 5_1\delta + 5_2\delta^2 + 5_3\delta^3 + \ldots + 5_t\delta^t$, where all discount factors increase proportionally to their respective future period.

Solving for the total discounted payoff, we get (note that $S\delta = \pi_1\delta + \pi_2\delta^2 + \pi_3\delta^3 + \ldots + \pi_t\delta^t$):

$$S = \pi + \pi_1\delta + \pi_2\delta^2 + \pi_3\delta^3 + \ldots + \pi_t\delta^t$$

$$S = \pi + S\delta$$

$$\pi = S - S\delta$$

$$\pi = S(1 - \delta)$$

$$S = \frac{\pi}{(1 - \delta)}$$

Inserting the numbers in the equation:

$$S = \frac{5}{(1 - 0.9090)}$$

$$S = 54.9451$$

Both S1 and S2 receive a total discounted payoff of S = 54.9451 when complying.

Eventually the grim trigger strategy is preferable if the total discounted payoff from choosing to comply in t periods is greater than 7. S1 knows that if he decides to behave opportunistically and thereby trigger the grim punishment, he will get a payoff of 7 – *but only for one period.* After than one period he will forever receive the 0 payoff associated with non-compliance.

[34] One unit of payoff refers to a payoff of 1

The strategy emerges when one of the states change their strategy from compliance to non-compliance in order to gain a payoff of 7 instead of 5, which accordingly leads to an outcome where none of the states comply in t periods. But the total discounted payoff associated with such a non-compliance strategy has no bearing on a state's choice of strategy: He will behave opportunistically if the total discounted payoff associated with compliance is smaller than what he receives from that one period following the opportunistic behaviour.

The difference between the two amounts of total discounted payoff that S1 might receive indicates that S1 is much better off choosing to behave himself and comply. This follows directly from the fact that 54.9451 > 7. S1 can gain almost eight times as much if he decides to behave non-opportunistically. The conclusion drawn from such good behaviour is that the grim punishment is effective, i.e. it comprises an economic incentive for the states to comply with their respective reduction commitments as set forth in the Kyoto Protocol.

According to the grim trigger strategy it is much more beneficial (in terms of payoff) for the states to put forth good behaviour and comply with the Kyoto Protocol. However, the fact that the empirical studies suggest that this is not the case in practice might tell us that the grim punishment did not work to maintain good behaviour among the states. How can that be?

The theory of grim trigger is a somewhat rigorous theory. It requires that all of the states of the Kyoto Protocol comply with their respective reduction commitment from the very beginning. That is indeed desirable, but it is also a utopia. As an unenforceable international agreement that includes a variety of states with diverging political beliefs and agendas and that is concerned with such a delicate matter as CO^2 emissions, which involves millions and millions of dollars, a reasonable portion of scepticism, at least as regards the first commitment period, is probably not out of context. And since the grim punishment hits instantly, it is no surprise that it was already triggered.

Something else that needs mentioning in connection with such matter is the size of the discount factor, δ. Being the discount factor of future payoffs it is determinative on what the states choose to do today. As is known from the above solving of S1's total discounted payoff the discount factor

constitutes approximately 0.9090. Setting up the equation $\frac{5}{(1-\delta)}$ and stating that the total discounted payoff should exceed 7, we get:

$$\frac{5}{(1-\delta)} > 7$$

$$5 > 7 \cdot (1-\delta)$$

$$5 > 7 - 7\delta$$

$$7\delta > 2$$

$$\delta > \frac{2}{7}$$

$$\delta > 0.2857$$

This means that as long as $\delta > 0.2857$ it is better to stick to the good behaviour than to behave opportunistically. Since the discount rate in this example is 0.9090, it is safe to say that it pays to behave well (forever). But this, of course, is dependent upon the discount rate; it has to be large enough to yield a total discounted payoff that creates sufficient incentives for the states to comply with the Kyoto Protocol. The greater the discount factor, the greater the amount of payoffs the states can expect to receive, which will eventually comprise incentives for the states to comply with their Kyoto Protocol reduction commitments.

2.5.2.1 The Nash Equilibria

We have already established that in the game of prisoners' dilemma the states end up confessing although they would receive a higher payoff if they chose not to confess. The reason for this was that the prisoners are rational individuals, who act so as to maximise their individual utility. The game is finite, and the prisoners know that. Therefore, no one dares to keep quiet for fear of receiving a low payoff. Consequently, they end up confessing and both receive 0. This is the only stable and rational outcome of the finite game of prisoners' dilemma, which constitutes the Nash equilibrium.

What about the *infinitely* repeated game of grim trigger? Does the outcome in which they both comply comprise a Nash equilibrium? Recall the definition of a Nash equilibrium. A Nash equilibrium emerges when both players of a game rightfully guess the draw of the opponent, and

therefore both play best responses to that guess. Such a situation would satisfy both players and no one would want to redo his did. With this definition in mind, the outcome of (compliance, compliance) in the grim trigger strategy constitutes a Nash equilibrium as long as $\delta > 0.2857$. Up to this point none of the states wish that they had played the game differently. This is conditioned upon the fact that the game is *infinite*. If the grim trigger game was a finite game, the states would not be able to stabilise an outcome of (compliance, compliance), which would therefore not constitute a Nash equilibrium.

The rigor and consistency upon which the grim trigger game is conditioned as well as the empirical studies evidencing that the states do not in practice comply with the reduction commitments, suggest that the grim punishment already hit as one or more member states decided to defect the good behaviour. Therefore, and sadly, the grim trigger illustrates just another theory that so far has not (practically) achieved behaviours different from the ones striving for individual utility, which do not benefit the atmosphere. Nevertheless, it might give rise to some interesting debates about the future architecture of the Kyoto Protocol. The revocation of the commitment periods might hold some implications for the future compliance with equivalent international agreements concerned with the protection of the climate.

2.6 An Extended Grim Trigger

In the following section of the present chapter I assume that the interaction between the WTO and the UN is possible in order to observe how the member states would act in this case and, accordingly, if such *acts* would benefit future compliance with the Kyoto Protocol.

The first question that arises is whether a member state would restrict trade with a fellow member state in the first place. Such refusal seems at first glance to be costly to the restricting state (further denoted S1), since he would also be foregoing an export or import opportunity. As both the prisoners' dilemma and the grim trigger strategy illustrated in Chapter 3, compliance demands an economic incentive. This follows directly from the fact that the states are rational individuals striving to maximise their individual utilities. So what is in it for S1?

The matrix is not entirely identical with the one presented in Chapter 3. With slight alterations it now looks like this:

S1 / S2	Not Comply	Comply
Not Comply	0, 0	6, -5
Comply	-5, 6	5, 5

If one of the member states, S1, complies with his reduction commitments, while S2 fails to do so, then S1 has the opportunity to cut off S2 as a trading partner by referring to the relevant articles of the WTO regime. Two implications for S1 now appear: He loses S2 as a trading partner, and as the only complying state left he is doing all the heavy lifting himself. In such case he receives a payoff that equals -5. For S2 it means that he loses S1 as a trading partner, which makes his payoff drop. It does not drop as much as S1's payoff, though, as S2, comparably, does not comply and thus avoids incurring additional costs.

No alterations are made to the original payoffs in Chapter 3 whenever both states comply or, conversely, fail to comply. If both S1 and S2 comply with their reduction commitments they will most likely suffer some costs (new technology, green production methods etc.), but they will eventually benefit from the liveable climate. And so they will both receive a payoff of 5. If they do not comply with their reduction commitments they will not be hit by the additional costs associated with compliance; however, the worsening of the atmosphere and climate is indicated by the 0 payoff. The payoffs obviously remain unchanged because none of the member states wish to invoke trade restrictions in such situations. Such action would only prompt the additional costs associated with losing a trading partner. They simply continue doing whatever they are doing.

In order to investigate which actions the new situation and the new payoffs might trigger, let us do the math one more time.

The total discounted payoff for both S1 and S2 in a situation of (compliance, compliance) is therefore still given as follows:

$$5 + 5_1\delta + 5_2\delta^2 + 5_3\delta^3 + \ldots + 5_t\delta^t$$

And the discount factor still equals $\frac{1}{1.10}$= 0.9090, which in turn yields a payoff of

$$5 + \left(5_1 \cdot 0.9090\right) + \left(5_2 \cdot 0.9090^2\right) + \left(5_3 \cdot 0.9090^3\right) + \ldots + \left(5_t \cdot 0.9090^t\right)$$

$$\frac{5}{1 - 0.9090}$$

$$54.9451$$

Also, it was established that as long as δ > 0.2857 – within the Nash Equilibrium – it is better to refrain from opportunistic behaviour. This, however, is dependent upon the discount rate: being the discount factor of future payoffs it is determinative for what the states choose to do today. It has to be large enough to yield a total discounted payoff that creates sufficient incentives for the states to comply with the Kyoto Protocol at present. The greater the discount factor, the greater the payoff the states can expect to receive, which in turn constitutes an incentive to comply.

If both states start by complying followed by non-compliance on the part of S2, then the situation changes from (5, 5) to (-5, 6). How would S1 react to this change? Obviously, S1 is not interested in non-compliance, which to him yields a payoff of 0 forever. But this is, indeed, what S1 decides to do. If he decides to keep complying, then he will receive -5 in t periods and probably forever, seeing as S2 will receive 6 as a result of this outcome of the game, and that is the largest payoff possible to S2. He has no wish to move. In order to avoid getting -5 forever, S1 decides not to comply, because he prefers receiving 0 over -5.

Now, let us turn to the actions of S2. S2 knows that S1 now has the opportunity to cut him off as a trading partner and hence make his payoff associated with a non-compliance drop. The payoff increases from 5 to 6, but recall that in the matrix set-up in Chapter 3 the payoff would increase from 5 to 7 in this situation. Generally this means that allowing for interaction between the WTO and the UN makes the payoff of S2 drop nominally 1 unit (7 → 6), which accordingly translates into a smaller incentive given that he is a rational being seeking to maximise his individual utility.

If the total discounted payoff from choosing to comply in t periods is greater than 6, then the grim trigger is a sufficient deterrent. Therefore, following directly from the fact that **54.9451 > 6**, S2

keeps complying. In order to compare this outcome with the one found in Chapter 3 let us turn to the discount factor. We know that – given the payoffs in the matrix – the discount factor equals 0.9090, which triggers a situation in which S2 wishes to comply, since 54.9451 > 6. In Chapter 3 all discount factors greater than 0.2857 constituted a Nash equilibrium, i.e. a situation that none of the states wish to deviate from.

In the current situation the discount factor is:

$$\frac{5}{(1-\delta)} > 6$$

$$5 > 6 \cdot (1-\delta)$$

$$5 > 6 - 6\delta$$

$$6\delta > 1$$

$$\delta > 0.1667$$

This means that all discount factors greater than 0.1667 constitute Nash equilibria. In other words, S2 will refrain from opportunistic behaviour if δ > 0.1667, as this will render a total discounted payoff greater than 6.
If we compare the two 'minimums' of 0.1667 and 0.2857, respectively, it becomes evident that achieving a discount factor greater than 0.1667 is 'easier' than achieving one greater than 0.2857. Hence, achieving 54.9451 > 6 is easier than 54.9451 > 7. In practice this means that the grim punishment – ending up with (0, 0) – becomes more effective, as the payoff associated with opportunistic behaviour drops from 7 to 6.

With the extended grim trigger strategy the range of Nash equilibria (0.1667 → ∞) indicates that the states at present distribute more value to future outcomes than in the grim trigger strategy analysed above.

Since the states will get a payoff of 0 when they do not comply – in both the previous grim trigger and the extended grim trigger – it is the payoff associated with opportunistic behaviour that indicates how the states wish to act. As the payoff associated with opportunistic behaviour under the Kyoto Protocol (the grim trigger above) is greater than the payoff associated with opportunistic behaviour in a situation where restriction of trade is possible, I argue here that the

latter holds greater value to our climate. By allowing S1 to restrict trade with S2, then S2 will to a greater extent be deterred from engaging in opportunistic behaviour.

Answering my initial question of whether or not a member state would restrict trade with a fellow member state in case of the latter's non-compliance seems straightforward. If S2 engages in opportunistic behaviour and S1, on the one hand, does not invoke his right to restrict trade against S2, then S1 receives a payoff of -5 in t periods followed by 0 payoff forever.

If S1, on the other hand, responds to S2's opportunistic behaviour by restricting trade with him, then it is *more likely* (whenever $\delta > 0.1667$), compared to the grim trigger strategy encountered in Chapter 3, that S2 would not defect his obligations in the first place.

This extended grim trigger strategy is conditioned upon the assumption that the dispute settlement system of the WTO is far more successful than the compliance system of the Kyoto Protocol. An argument advocating the accuracy of this assumption is that money is at stake. Whenever the states are precluded from trade possibilities it shows in the bottom line figures of the state economy, and this of course is something that states prioritise. Such a finding is one hundred per cent consistent with the individual utility endeavours of a rational individual. The sad thing is not that the states act so as to maximise individual utility. The sad thing is that they *do not* act so as to blunt climate change and, in particular, the fatal consequences prompted by the humanly induced pollution of the atmosphere. The result seems to suggest that money ranks higher than climate, although there will be no money, no economy, no nothing if we keep polluting the air as we in fact do today.

2.7 Sub-conclusion

In the simple model the rationality among states renders a result in which the states overexploit the commons today, leaving a very small amount for future generations to pollute before the world will come to an end. In order to reach an outcome that is socially optimal the Kyoto Protocol was agreed to. The agreement, theoretically, should be able to promote what is common good and, hence, make the states strive for the maximisation of aggregate utility. The problem, however, is that the Kyoto Protocol is, per definition, an international agreement and so cannot be enforced. States are sovereigns, and since compliance is costly compared to non-compliance, the states choose to continue to maximise their own individual utilities. Empirical studies support this

claim. Prisoners' dilemma serves to illustrate how the states choose *not* to comply, since in this finitely repeated game they do not dare to comply for fear of a low payoff. However, new possibilities are created by revoking the fixed commitment periods from the characteristics of the Kyoto Protocol and by this revocation making the game an infinitely repeated game. It can, theoretically, create an incentive for the parties to comply. Finally, testing the states' reaction to the rendering possible of the interaction between WTO and UN, showed us that such interaction can have a positive influence on how the states decide to *play the game*. The decreasing payoff associated with non-compliance makes the punishment a better deterrent on the states' engagement in opportunistic behaviour.

It is, therefore, concluded that the Kyoto Protocol in itself, although it strives towards a social optimum, does not create a sufficient incentives for the states to comply with their obligations pursuant to its provisions. Revoking the commitment periods, however, might be a lead on how to change such non-compliance. The states show even more willingness to comply in case the interaction between WTO and UN became a reality. Testing the hypothetical situation showed us that the states would be even more unlikely to engage in opportunistic behaviour in the first place. The interaction between the WTO and UN, therefore, positively influences the states' choice between compliance and non-compliance – a conclusion that cannot be drawn in relation to the Kyoto Protocol alone. In it's current architecture, the compliance mechanism doesn't constitute a sufficient deterrent. It needs help.

CHAPTER 3: LEGAL ANALYSIS

3.1 Introduction

The increasing number of emerging international organisations and state associations results in an equally proportional increase in the number of legal frameworks aiming to regulate them. One question that arises in the wake of such increase is how the legal frameworks coexist and possibly cooperate. Both the Kyoto Protocol of the United Nations Framework Convention of Climate Change and the WTO Agreement are examples of such legal frameworks. In order to answer the overriding research question I commit myself to answering the legal sub-question of to what extent a member state of both the WTO and the Kyoto Protocol can adopt domestic regulation according to which the state in question can restrict trade with a fellow member state due to the latter's non-compliance with the Kyoto Protocol, arguing that such domestic regulation constitutes a lawful measure in accordance with Article XX of the GATT?

In order to answer this question I will conduct a thorough analysis of Article XX of the GATT. I shall begin the analysis with the most severe example of restriction: refusal. This means that I will initially answer the question of to what extent a member state of both the WTO and the Kyoto Protocol can adopt domestic measures according to which the state in question has the possibility to *refuse* to trade with fellow member states if they do not comply with the Kyoto Protocol, arguing that such domestic regulation constitutes a lawful measure in accordance with Article XX of the GATT (further denoted *the refusal measure*). In case the refusal measure turns out not to fall under the scope of Article XX of the GATT, I shall render the measure less restrictive in order to examine the scope of Article XX.

3.2 The General Exceptions

The agreements covered by the WTO Agreement, including the GATT, do not explicitly refer in any one provision to the protection of the climate, the atmosphere or the like. The GATT does, however, provide for general exceptions that might be invoked in order to protect measures deviating from the aim of dissolving trade hindrances among the WTO member states. Article XX of the GATT prescribes:[35]

[35] Only the paragraphs relevant to this thesis are cited

> '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, nothing in this Agreement shall be construed to prevent the adoption or enforcement by any contracting party of measures:
>
> (b) necessary to protect human, animal or plant life or health; (…)
> (d) necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of this Agreement, including those relating to customs enforcement (…)
> (g) relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption; (…)'[36]

3.3 Preliminary Issues

Article XX is, one might say, *double*. It consists of the introductory clause, *the chapeau*, and the individual exceptions listed in sub-paragraphs (a)-(f). The burden of proving that the measure in question is in accordance with Article XX, as regards both the chapeau and the sub-paragraph(s) in question, rests on the party/state that sought to invoke the exception. In the *US – Gasoline*[37] case the Appellate Body stated that the 'burden of demonstrating that a measure provisionally justified as being within one of the exceptions set out in the individual paragraphs of Article XX does not, in its application, constitute abuse of such exception under the chapeau, rests on the party invoking the exception. That is, of necessity, a heavier task than that involved in showing that an exception, (...) encompasses the measure at issue'.[38]
The approach and analysis that the various panels and the Appellate Body institute are therefore accordingly 'double'; the defending party must initially prove that the measure invoked by him falls under one of the sub-paragraphs (a)-(j), and accordingly that the measure applies in a manner that does not constitute arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade, as prescribed in the chapeau. The Appellate Body stated in the *US – Gasoline* case that the analysis is 'two-

[36] GATT Art. XX(a), (b), (d), (g)
[37] *United States – Standards for Reformulated and Conventional Gasoline* 29 January 1996
[38] *US – Gasoline case*: Report of the Appellate Body (1996) IV pp. 22-23

tiered': '(…) the measure at issue must not only come under one or another of the particular exceptions - paragraphs (a) to (j) - listed under Article XX; it must also satisfy the requirements imposed by the opening clauses of Article XX. The analysis is, in other words, two-tiered: first, provisional justification by reason of characterization of the measure under [XX(a)-(j)] second, further appraisal of the same measure under the introductory clauses of Article XX'.[39]

3.4 Article XX(d)

As the legal sub-question to my thesis implies, to begin with, I shall start by examining to what extent the refusal measure might be justified by Article XX(d); i.e. if such measure is necessary to secure compliance with laws or regulations which are not inconsistent with the provisions of the GATT.

Generally, for a measure to be consistent with (d) it has to satisfy both parts of the sub-paragraph. First, the measure should *secure compliance with laws and regulations,* and, second, such *laws and regulations should not be inconsistent with the GATT*.

1. Would a measure like the one described above *secure compliance* with the laws and regulations? There is no doubt as to the fact that the *laws and regulations* refer to the Kyoto Protocol. But does the measure *secure compliance* with it? In the *EEC – Parts and Components*[40] case the panel found the phrase to mean 'to enforce obligations under laws and regulations'[41] and *not* 'to ensure the attainment of the objectives of the laws and regulations';[42] i.e. it is about the specific obligations rather than the objectives of the Kyoto Protocol. If one state, S1, simply adopts a measure domestically according to which S1 refuses to trade only with states complying with the Kyoto Protocol, such measure would neither facilitate nor support the enforcement of its obligations under the Kyoto Protocol. The measure would not include any provisions relating to the reduction of CO^2 emissions. Rather, one might argue, it is invoked as a method to create incentives for the states to comply with the Kyoto Protocol (by means of excluding them from some trade opportunities). The refusal measure would be occupied with

[39] *Ibid.* IV p. 22
[40] *EEC – Regulation on Imports of Parts and Components* 22 March 1990
[41] *EEC – Parts and Components case*: Report of the Panel (1990) V:5.17
[42] *Ibid.* V:5.17

the ensuring of the attainment of the objectives of the Kyoto Protocol, and not with the enforcement of obligations under the Kyoto Protocol. It can, for the above reasons, readily be concluded that such measure would not *secure compliance* consistently with Article XX(d), and it therefore seems meaningless to proceed with such severe example in relation to this sub-paragraph.

Rather, let us proceed with sub-paragraphs (b) and (g), respectively. Contrary to alphabetic logic I begin by examining sub-paragraph (g), and not (b), as the former involves the oldest judicial decisions given by the panels and the Appellate Body, and thus this sequence should help spot any possible development in the judicial practice.

3.5 Article XX(g)

The question that has to be answered in this section is whether a domestically adopted measure, which requires the state in question to refuse to trade with fellow member states of the WTO and the Kyoto Protocol if they do not comply with their reduction commitments, constitutes a measure relating to the conservation of exhaustible natural resources if such measures are made effective in conjunction with restrictions on domestic production or consumption.

Sub-paragraph (g) consists of three parts. In order to examine if all parts are satisfied, I will approach the refusal measure by means of a three-step examination:

In order for the measure in question to fall under sub-paragraph (g):

1. The measure must be concerned with *the conservation of exhaustible natural resources*, and
2. *Relate to* the conservation of the exhaustible natural resources, and
3. Be *made effective in conjunction with restrictions on domestic production or consumption*.[43]

1. Is the refusal measure *concerned with the conservation of exhaustible natural resources*? During the *Shrimp-Turtle*[44] case the Appellate Body considered the scope of the phrase 'exhaustible natural resources', and held that the words were drafted fifty years ago and therefore had to be read 'in the light of contemporary concerns of the community of nations about the protection and conservation of the environment'.[45] It goes on referring

[43] Committee on Trade and Environment (2002) p. 8
[44] *United States –Import Prohibition of Certain Shrimp and Shrimp Products* 12 October 1998
[45] *Shrimp-Turtle case*: Report of the Appellate Body (1998) VI.B.129

to the preamble of the WTO Agreement, which recognises the importance of a *sustainable environment* in the very first part:

> 'The Parties to this Agreement,
>
> Recognizing that their relations in the field of trade and economic endeavour should be conducted with a view to raising standards of living, ensuring full employment and a large and steadily growing volume of real income and effective demand, and expanding the production of and trade in goods and services, while allowing for the optimal use of the world's resources in accordance with the objective of sustainable development, seeking both to protect and preserve the environment and to enhance the means for doing so in a manner consistent with their respective needs and concerns at different levels of economic development, (…)'.[46]

The term *natural resources* is non-static. To the contrary, it is evolutionary, and it includes both living and non-living resources.[47] Whether the natural resources are *exhaustible* depends on whether they are threatened with depletion and extinction (mainly) because of human activities. There can be no doubt as to whether the air we breathe comprises a natural resource. But is it exhaustible? A similar question was asked in the *US – Gasoline* case, in which the panel as well as the Appellate Body stated that 'clean air was a "natural resource" that could be "depleted"'. They went on concluding that 'a policy to reduce the depletion of clean air was a policy to conserve an exhaustible natural resource within the meaning of Article XX(g)'.[48] The *US - Gasoline* case is the case most similar to the refusal measure as regards the underlying policy. Indeed, it was stated that 'clean air' is an exhaustible natural resource. Taking into consideration the *US - Gasoline* case in particular as well as the preamble of the WTO Agreement, interpreting the refusal it can be argued that such measure is concerned with the conservation of exhaustible natural resources for purposes of Article XX(g).

Note that the refusal measure ultimately is about reducing the emissions of CO^2 into the atmosphere in order to avoid that the greenhouse gases build up and cause the Earth to be

[46] Preamble of the WTO Agreement
[47] *Shrimp-Turtle case*: Report of the Appellate Body Report (1998) VI.B.130
[48] *US – Gasoline case*: Report of the Appellate Body Report (1996) II, p. 14

overheated. But this is the *policy* behind the actual measure. Panels and the Appellate Body have stated in various cases that it is the *measure*, and not the *environmental policy*, that is in focus. This was already argued by the panel in the first *Tuna-Dolphin*[49] case: 'The conditions set out in Article XX(g) which limit resort to this exception, namely that the measures taken must be related to the conservation of exhaustible natural resources (…) refer to the trade measure requiring justification under Article XX(g), not however to the conservation policies adopted by the contracting party'.[50] This position was reaffirmed in the *US - Gasoline* case, in which the panel stated that it was not for the panel to examine the desirability or necessity of the environmental objectives of the measure in question. The Appellate Body explained: 'It does not mean, or imply, that the ability of any WTO Member to take measures to control air pollution or, more generally, to protect the environment, is at issue. That would be to ignore the fact that Article XX of the *General Agreement* contains provisions designed to permit important state interests - including (…) the conservation of exhaustible natural resources - to find expression. (…) Indeed, in the preamble to the *WTO Agreement* and in the *Decision on Trade and Environment*, [footnote omitted] there is specific acknowledgement to be found about the importance of coordinating policies on trade and the environment. WTO Members have a large measure of autonomy to determine their own policies on the environment (including its relationship with trade), their environmental objectives and the environmental legislation they enact and implement. So far as concerns the WTO, that autonomy is circumscribed only by the need to respect the requirements of the *General Agreement* and the other covered agreements'.[51]

For all the foregoing reasons it seems unlikely that a panel and/or the Appellate Body would consider a refusal measure to be concerned with the conservation of exhaustible natural resources in accordance with Article XX(g), as it is only concerned with such conservation as regards *the underlying environmental policy* and not the actual measure itself.

Since it was already concluded that the refusal measure cannot be legitimately invoked in a manner lawfully consistent with the Article XX(g), as it did not even satisfy the first requirement of being concerned with the conservation of exhaustible resources, I shall immediately move on to Article XX(b). It makes no sense to move on to the second requirement in Article XX(g).

---

[49] *United Stated – Restrictions on Imports of Tuna* 3 September 1991
[50] *Tuna-Dolphin case*: Report of the Panel (1991) 5.32, p. 36
[51] *US – Gasoline case*: Report of the Appellate Body (1996) V, pp. 29-30

3.6 Article XX(b)

The question that has to be answered in this section is whether the refusal measure constitutes a measure *necessary to protect human, animal or plant life or health*. Again, I shall adopt the approach laid down in the *US - Gasoline* case, which also dealt with the scope of Article XX(b). In order to be able to state that the refusal measure satisfies Article XX(b), I shall establish the following elements:

1. 'that the *policy* in respect of the measures for which the provision was invoked fell within the range of policies designed to protect human, animal or plant life or health;
2. that the inconsistent measures for which the exception was being invoked were *necessary* to fulfil the policy objective; (…)'[52]

1. In the *US - Gasoline* case the panel stated that 'a policy to reduce air pollution resulting from the consumption of gasoline was a policy within the range of those concerning the protection of human, animal and plant life or health mentioned in Article XX(b)'.[53] The reasoning behind such finding, which both parties and the panel agreed on, was that 'since about one-half of such pollution was caused by vehicle emissions, and the Gasoline Rule reduced these, the Gasoline Rule was within the range of policy goals described in Article XX(b)'.[54] In a later case, the *Asbestos*[55] case, the panel noted that the use of the word *protect* led it to conclude that in order for a measure to be consistent with Article XX(b) a risk for public health etc. had to be identified.[56] It finally concluded that the presence of asbestos and asbestos-containing products 'posed a risk because of the risks involved in working with those products'.[57]

   Applying the reasoning given to the refusal measure in both the *US - Gasoline* and *Asbestos* cases, it shall be argued that a policy to protect the climate by means of a refusal measure is in fact (and literally) concerned with the protection of both human, animal and plant life and health from the risk that climate change imposes.

---

[52] *US – Gasoline case*: Report of the Panel (1996) VI.D:6.20
[53] *Ibid.* VI.D:6.21
[54] *Ibid.* VI.D:6.21
[55] *European Communities – Measures Affecting Asbestos and Asbestos-Containing Product*, 18 September 2000
[56] *Asbestos Case:* Report of the Panel (2000) VIII.E.4:8.184
[57] *Ibid.* VIII.E.4(c)(i)8.193

2. Accordingly, I intend to examine if the refusal measure might be 'necessary' in accordance with the wording of Article XX(b). Such examination will be conducted through application of the test defined in the *Thailand – Cigarettes*[58] case: 'The Panel concluded (…) that the import restrictions imposed by Thailand could be considered to be "necessary" in terms of Article XX(b) only if there were no alternative measure consistent with the General Agreement, or less inconsistent with it, which Thailand could reasonably be expected to employ to achieve its health policy objectives'.[59] Note that the panel adds a comment to the term *reasonably*, stating 'the word "reasonably" should not be interpreted loosely (…). The fact that, administratively, one measure may be easier to implement than another does not mean that the other measure is not reasonably available. We consider that the existence of a reasonably available measure must be assessed in the light of the economic and administrative realities facing the Member concerned but also by taking into account the fact that the State must provide itself with the means of implementing its policies. Thus, the Panel considers that it is legitimate to expect a country such as France with advanced labour legislation and specialized administrative services to deploy administrative resources proportionate to its public health objectives and to be prepared to incur the necessary expenditure'.[60]

   The *necessity test* has evolved through the judicial practice of the WTO from a 'least-restrictive approach' to a 'less-restrictive trade approach' supplemented with a proportionality test.[61] The question that I have to ask is therefore if any less restrictive alternative measure consistent with the GATT, or less inconsistent with it, exists, which the state invoking the exception could reasonably be expected to employ to achieve its climate protection objectives? In answering a similar question in the *Asbestos* case, the panel referred to the *Korea – Beef*[62] case, in which it stated that one aspect of determining whether there are any less restrictive WTO-consistent trade measures available is 'the extent to which the alternative measure "contributes to the realization of the end

[58] *Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes* 7 November 1990
[59] *Thailand - Cigarettes*: Report of the Panel (1990) VI.B.75
[60] *Asbestos Case:* Report of the Panel (2000) VIII.E.4:8.207
[61] Committee on Trade and Environment (2002) p. 16
[62] *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef* 11 December 2000

pursued'.[63] Furthermore, it was argued, again referring to the *Korea - Beef* case, that '"[t]he more vital or important [the] common interests or values" pursued, the easier it would be to accept as "necessary" measures designed to achieve those ends'.[64] It finally concluded that the objective of the measure invoked in the *Asbestos* case was the preservation of human life and health by reducing or eliminating the life-threatening risk associated with asbestos products. It stated, 'The value pursued is both vital and important in the highest degree'.[65]

Note, generally, that '[p]roportionality is the principle used to assess the lawfulness of (…) countermeasures. It is intended to act as a brake on escalating cycles of transactional violence'.[66] And it is indeed accepted to constitute a general principle of international law validated through a variety of judicial decisions rendered by a multiplicity of courts, tribunals etc.[67] Note that the trade restriction is presumed to be lawful as such, but if it crosses the threshold of proportionality, it might be rendered unlawful.[68] In such case, 'if "less intrusive means" would have sufficed - then responsibility for acting unlawfully may attach to both parties.[69] Ultimately, it is about balancing the different interests at stake.

The objectives of the refusal measure would also, ultimately, be the preservation of human life and health by reducing as much as possible the life-threatening risks associated with extensive CO^2 emissions causing the temperature of the Earth to increase above reasonable numbers. If one were to put emphasis on such argument, it can be concluded that a refusal measure - in this regard - has a fair chance of being proportional, as the value of human life and health is (luckily) considered to be *both vital and important in the highest degree*.

Still, though, I shall examine if any alternative trade measure is available - one that is both less restrictive and successful in meeting its ends. As stated in the *Asbestos* case, a state cannot 'reasonably be expected to employ *any* alternative measure if that measure would

[63] *Asbestos Case*: Report of the Appellate Body (2001) VII.B.172
[64] *Ibid.* VII.B.172
[65] *Ibid.* VII.B.172
[66] Franck (2008) p. 715
[67] *Ibid.* p. 716
[68] *Ibid.* p. 716
[69] *Ibid.* p. 739

> involve a continuation of the very risk that the [refusal measure] seeks to "halt". Such an alternative measure would, in effect, prevent [the state] from achieving its chosen level of health protection'.[70]
>
> Due to the vague description of the refusal measure it cannot be finally concluded if the measure might be replaced with another less restrictive measure still managing to meet its objectives. However, it seems highly likely that it can be reasonably expected of the state in question to adopt a less restrictive measure. If, in a dispute, the refusal measure is viewed as a measure restricting all trade, i.e. an unconditioned embargo including all trade with all sorts of goods, services etc. that the disputing parties conduct with one another, then, for sure, it will be a difficult task arguing that no measure that is less restrictive can be successful in attaining the intended objective of halting the risks associated with extensive levels of CO^2 emissions.

In any event, let us turn to the introductory clause. I have already established that a refusal measure would encounter serious obstacles with regard to arguing that the measure is in accordance with sub-paragraphs (b), (d) and (g) of Article XX.

3.7 Summing Up

In continuation of the discussion in the previous section in relation to sub-paragraph (b), it seemed likely that a state could be reasonably expected to employ a less restrictive measure than the refusal measure and thereby be a proportionate measure still managing to attain the objective of protecting the climate. In order to proceed let us render the measure a little less restrictive, asking to what extent a member state of both the WTO and the Kyoto Protocol can adopt domestic regulations according to which the state in question *restricts trade as regards certain goods* with a fellow member state due to the latter's non-compliance with the Kyoto Protocol, arguing that such domestic regulations constitute a lawful measure in accordance with Article XX of the GATT (further denoted *the less restrictive measure*).

This less restrictive measure is extremely vaguely defined. I insist on such vagueness. I do not consider the drafting of a precise real-life example to be possible. It would require a degree of

[70] *Asbestos Case*: Report of the Appellate Body *(*2001) VII.B.174

detail that eventually would spoil my aim of remaining as impartial as possible. I therefore intend to maintain the broad scope of the less restrictive measure for the purpose of providing a conclusion that is not limited to one specific example.

The less restrictive measure is still concerned with protecting the climate but in a less restrictive manner, as was seen in relation to the refusal measure. And it still refers to states' non-compliance with the Kyoto Protocol. It became evident that the measure came furthest in applying Article XX(b), i.e. *necessary to protect human, animal or plant life or health*. Assume that the measure is now as 'less restrictive' as required, and it can be concluded that it falls under the scope of sub-paragraph (b). Accordingly, it remains to be seen if the less restrictive measure is likewise consistent with the introductory clause of Article XX.

3.8 The Chapeau

Generally, whenever a measure has been concluded to fall under the scope of one of the sub-paragraphs of Article XX(a)–(j), one should turn to the introductory clause, *the chapeau.* The chapeau consists of three parts, but before turning to the analysis hereof an initial remark should be given on the general scope of the chapeau.

Before examining the respective parts, it should be noted that the Appellate Body in the *Shrimp-Turtle* case defined the *general scope* of Article XX: 'The task of interpreting and applying the chapeau is (…) essentially the delicate one of locating and marking out a line of equilibrium between the right of a Member to invoke an exception under Article XX and the rights of the other Members under varying substantive provisions (e.g., Article XI) of the GATT 1994, so that neither of the competing rights will cancel out the other and thereby distort and nullify or impair the balance of rights and obligations constructed by the Members themselves in that Agreement. The location of the line of equilibrium, as expressed in the chapeau, is not fixed and unchanging; the line moves as the kind and the shape of the measures at stake vary and as the facts making up specific cases differ'.[71]

In order to conduct such analysis, as indicated in this statement by the Appellate Body, one has to resort to treaty interpretation. As the WTO Agreement is considered to constitute a binding treaty, various panels and the Appellate Body have indeed applied the Vienna Convention of Law of

[71] *Shrimp-Turtle Case*: Report of the Appellate Body (1998) VI.C.159

Treaties (further denoted the *VCLT*) as a guide for interpreting the WTO-covered agreements, including the GATT.[72] They are explicitly required to do so pursuant to Article 3:2 according to which the WTO-covered agreements must be interpreted consistently with customary rules of interpretation of public international law. Articles 31 and 32 are generally recognised as being a codification of international customary law, which consequently means that they apply throughout international law, and not only to the law of those states that are parties to the VCLT.[73] 'Articles 31 and 32 of the VCLT and the interpretation requirements stated in Article 3:2 of the DSU is now entrenched in WTO law. [They provide] a legal test from which Panels cannot deviate when reviewing provisions in the WTO Agreements. Failing to apply this test or using alternative methods of treaty interpretation can result in overturned rulings'.[74]

Additionally, the *principle of effectiveness* 'flowing from the contextual analysis required under Article 31 of the VCLT'[75] is essential in the interpretation of international law.
The principle indicates that when two interpretations are possible in a given context and one of them prevents the treaty from having the *appropriate* effect, then the principle of good faith alongside the purpose and object of the treaty require that the effective interpretation is adopted.[76] If such principle is not applied throughout the interpretation of international law, whole treaty articles or paragraphs risk being rendered redundant, which of course is undesirable as all terms of the treaty must be given effect.[77]

The functional scope of the chapeau was identified in the *US – Gasoline* case, in which the Appellate Body held that the purpose and object of the chapeau was, generally, to prevent abuse or illegitimate use of the exceptions contained in Article XX.[78] Similar to the statement in the *Shrimp-Turtle* case just mentioned, the Appellate Body underscored the balance that the chapeau should provide between the states seeking to invoke an exception and the legal rights of the other states involved.[79] The general exceptions 'need to be read in context and in such a manner as to give effect to the purposes and objects of the *General Agreement* [cf. the VCLT Article 31:1]. The

[72] Cameron and Gray (2001) p. 252
[73] *Ibid.* p. 254
[74] Cameron and Gray (2001) pp. 255-256
[75] *Ibid.* p. 256
[76] *Ibid.* p. 256
[77] *Ibid.* p. 256
[78] *US – Gasoline case*: Report of the Appellate Body (1996) III.B, p. 22
[79] *Ibid.* III.B, p. 22

context of [the general exceptions] includes the provisions of the rest of the *General Agreement*, including in particular Articles I, III and XI; conversely, the context of Articles I and III and XI includes Article XX. (…) The relationship between the affirmative commitments set out in, *e.g*., Articles I, III and XI, and the policies and interests embodied in the "General Exceptions" listed in Article XX, can be given meaning within the framework of the *General Agreement* and its object and purpose by a treaty interpreter only on a case-to-case basis, by careful scrutiny of the factual and legal context in a given dispute, without disregarding the words actually used by the WTO Members themselves to express their intent and purpose'.[80]

The chapeau consists of three parts. The measure in question should *not* constitute:

1. a means of arbitrary discrimination between countries where the same conditions prevail, or
2. a means of unjustifiable discrimination between countries where the same conditions prevail, or
3. a disguised restriction on international trade.

As the two 'or' imply, the dissatisfaction of merely one of the three parts is enough to render the measure in question a violation of the chapeau. Additionally, it should be noted that as regards *arbitrary or unjustifiable discrimination* it 'addresses, not so much the questioned measure or its specific contents as such, but rather the manner in which that measure is applied'.[81] The Appellate Body in both the *Shrimp-Turtle* case and the *Asbestos* case reaffirmed such position.[82] In the *Asbestos* case the panel deployed a two-tiered approach to this part of the chapeau. Initially the panel sought to determine if the measure in question was applied in a discriminatory matter and, accordingly, if the discrimination between countries where the same conditions prevail was arbitrary and/or unjustifiable.[83] Note that the 'and/or' indicates that justifiability and arbitrariness of (possible) discrimination must be dealt with separately. The Appellate Body underlined this by stating that if 'the application of the measure is found to be discriminatory, it still remains to be seen whether it is *arbitrary* and/or *unjustifiable* between countries where the

[80] *Ibid.* III.B, p. 22
[81] *US – Gasoline case:* Report of the Appellate Body (1996) IV, p. 21
[82] Committee on Trade and Environment (2002) p. 22
[83] *Asbestos case*: Report of the Panel (2000) VIII.E.4:8.226

same conditions prevail'.[84]

3.8.1 Arbitrary Discrimination

In the *Shrimp-Turtle (Article 21.5)*[85] case the panel defined the ordinary meaning of *arbitrariness* as 'capricious, unpredictable and inconsistent'.[86] It further held that the application of a measure constitutes arbitrary discrimination if it imposes 'a single, rigid and unbending requirement that countries (applying for certification) adopt a comprehensive regulatory programme that is essentially the same as the [state's] (…)' and without taking into account how appropriate the measure is in relation to the varying conditions prevailing in the other states.[87]

The vague definition of the less restrictive measure prevents me from drawing an exact conclusion as to whether the measure constitutes arbitrary discrimination. However, nothing seems to indicate that the less restrictive measure *per se* applies in an unpredictable, inconsistent and capricious manner in correlation with the specific goods and services involved. It might, though, on the one hand, be argued that the application of the measure imposes 'a single, rigid and unbending requirement that states wishing to take part in the regulation adopt a comprehensive regulatory programme essentially the same as the one applying to the state invoking the measure without taking into account the varying conditions prevailing in the different states. On the other hand, the measure is closely linked to the Kyoto Protocol, and no states would participate in the less restrictive measure unless they were member states of the Kyoto Protocol as well. The states have already consented to the Kyoto Protocol, whose system has in fact taken into account the varying conditions prevailing in the different states. The member states of the Kyoto Protocol have agreed to protect the climate system 'in accordance with their common but differentiated responsibilities and respective capabilities. Accordingly, the developed country Parties should take the lead in combating climate change and the adverse effects thereof'.[88] I hold, therefore, that as the system of the Kyoto Protocol is not affected by the less restrictive measure, such measure is indeed taken into account indirectly through the

[84] *Ibid*. VIII.E.4:8.226
[85] *United States – Import Prohibition of Certain Shrimp and Shrimp Products (Recourse to article 21.5 by Malaysia)* 15 June 2001
[86] *Shrimp-Turtle (Article 21.5) case*: Report of the Panel (2001) V.D:5.66
[87] *Ibid.* V.D:5.122
[88] Kyoto Protocol Art. 3:1

adoption of the conditions underlying the system of the Kyoto Protocol to the present measure. Such adoption is of course a prerequisite to my claim that the measure does not constitute arbitrary discrimination.

3.8.2 Unjustifiable Discrimination

a. International Negotiation:
   In the *Shrimp-Turtle (Article 21.5)* case it was established that it is for the defending state (i.e. the one seeking to invoke an exception under Article XX) to take initiative to engage all parties interested, across the border, in negotiations about the specific policy. The state seeking to invoke the less restrictive measure simply has to make a serious effort in good faith to negotiate before the enforcement of a unilateral measure.[89]

b. Flexibility of the Measure:
   The approach for implementation of the measure needs to be flexible; it has to take into account the varying conditions and situations of all states involved. The Appellate Body underscored this position in the *Shrimp-Turtle (Article 21.5)*[90] case, stating that 'conditioning market access on the adoption of a programme *comparable in effectiveness*, allows for sufficient flexibility in the application of the measure so as to avoid "arbitrary or unjustifiable discrimination"'.[91]
   The less restrictive measure – although it is per se *less restrictive* – seems to offer little flexibility. I have not defined how the specific goods and services involved have been identified, but assuming that the restriction on trade with these goods and services is fixed, it will affect different states differently. While the economy of one state might depend largely on the export of one of the goods included in the less restrictive measure, the economy of another state might be affected to a much smaller degree as the goods in question are not particular for that other state. The rigidity of the application of the less restrictive measure might cause severe economic problems.

   Note that the number of WTO member states *exceeds* the number of member states of the Kyoto Protocol. Despite the fact that all member states of the Kyoto Protocol are

[89] *Shrimp-Turtle (Article 21.5) case*: Report of the Panel (2001) V.D:5.124
[90] *United States – Import Prohibition of Certain Shrimp and Shrimp Products (Recourse to article 21.5 by Malaysia)* 22 October 2001
[91] *Shrimp-Turtle (Article 21.5) case*: Report of the Appellate Body (2001) VI.B:144

also member states of the WTO, except for two countries, Kazakhstan and Monaco, the point of departure is the WTO regime. This means that if one member state of both the WTO and the Kyoto Protocol was to restrict trade by applying Article XX based directly on non-compliance with the Kyoto Protocol, then the trade restriction would merely apply to the member states of the Kyoto Protocol and not to the residual pool of WTO member states. Note that to date the Kyoto Protocol has 38 member states, whereas the WTO has 159, making the residual pool consist of 121 states. The less restrictive measure could therefore only be invoked against the 38 states that are members of *both* the WTO and the Kyoto Protocol, but not the residual 121 states that are not members of the Kyoto Protocol. On the other hand, though, one might argue that ratifying the Kyoto Protocol is enough to clear the discriminatory factor, as consent hereto is voluntary. As states ratify the Kyoto Protocol they commit themselves to adhering to its rules. Such argument would probably have little value, though, as the member states of the Kyoto Protocol, when agreeing on the rights and obligations of the protocol, could not be expected to foresee the possible consequences that might follow from the less restrictive measure as stipulated here.

3.8.3 A Disguised Restriction on Trade

The panel in the *Asbestos* case stressed that the key to understanding the full expression of *disguised restriction on international trade* is not so much the term 'restriction', but the term 'disguised', and that 'to disguise' is linked to an intention. 'Accordingly, a restriction which formally meets the requirements of Article XX(b) will constitute an abuse if such compliance is in fact only a disguise to conceal the pursuit of trade-restrictive objectives'.[92] Generally, panel reports and Appellate Body reports have identified three conditions which a measure has to meet in order to *not* constitute a disguised restriction on international trade.

First, the measure should be publicly announced. Second, the Appellate Body held in the *US – Gasoline* case that *disguised restriction* includes *disguised discrimination*. The panel reaffirmed such position in the *Asbestos* case, stating that 'the kinds of considerations pertinent in deciding whether the application of a particular measure amounts to "arbitrary or unjustifiable discrimination" may also be taken into account in determining the presence of a

[92] *Asbestos case*: Report of the Panel (2000) VIII.E.4:8.236

"disguised restriction" on international trade'.[93] Third, and also in the *Asbestos* case, the panel examined the design, architecture and structure of the measure in question 'in order to discern the protective application of the measure'.[94]

There seems to be no hindrances to the public announcement. It comprises a formal requirement that is easily satisfied by ensuring by various means sufficient public availability. In relation to the considerations additionally needed here, as to whether the measure in question applies in an *arbitrary or unjustifiable discrimination*, I refer to my claim as set forth in paragraphs one and two, respectively. Despite the fact that I recognise the importance of designing and structuring the less restrictive measure in a non-protective manner, it is not possible to draw any concrete conclusion in this regard.

3.9 Sub-conclusion

It seemed straightforward to come to the conclusion that a refusal measure would not be concerned with the conservation of exhaustible natural resources pursuant to sub-paragraph (g), nor would it secure compliance with the rules of the Kyoto Protocol consistent with sub-paragraph (d). Additionally, I concluded that the refusal measure would not pass the *necessity test* set out in sub-paragraph (b). Although the objective of the refusal measure, ultimately, is the preservation of human life and health, that is considered to be both vital and important in the highest degree, by reducing as much as possible the life-threatening risks associated with extensive CO^2 emissions, the severe negative impact of the measure would hamper the legal case of the state seeking to invoke the refusal measure.

Although neither panel reports nor Appellate Body reports have been asked to consider measures that relate to climate change as such, for instance in relation to measures restricting trade due to the protection of the climate, nothing in the judicial practice so far seems to indicate that it cannot or should not do so. In fact, in the *US – Gasoline* case that I have referred to multiple times throughout this analysis the measure relating to a 'Clean Air Act' was found to be consistent with Article XX(g). Likewise in the *Asbestos* case, the measure in question was concluded to be consistent with Article XX(b). Whereas in the former the application of the measure was considered to be discriminatory, the application of the latter was not considered to be so. The

[93] *Ibid*. VIII.E.4:8.237
[94] *Ibid*. VIII.E.4:8.236

'appellate tribunal found the exclusion "necessary" to [the defending state's] objective of eliminating all asbestos, and refused to heed [the claimant's] call to consider whether comparable levels of health protection could not have been achieved by a more selective form of prohibition. It concluded that the government's chosen health policy - zero asbestos - could not be challenged as unreasonable on the ground that a different strategy would have been almost as efficacious in protecting the public health'.[95] This is a positive development.

However, the analysis points towards Article XX(b) as the sub-paragraph most likely to exempt the less restrictive measure from legal obligations following from the application of for instance Article I and/or Article III:4 on general most-favoured-nation treatment and less favourable treatment of imported products vis-à-vis national products, respectively. In the end it is about a balance that renders the trade restriction in question proportionate to the interests that it seeks to protect, and in the 'particular' case of the less restrictive measure it does not seem straightforward to conclude that its application constitutes neither arbitrary nor unjustifiable discrimination. In order for such measure to fall under the exception of Article XX(b), the human life and health argument has to be boldly underscored.

[95] Franck (2008) p. 750

CHAPTER 4: INTEGRATED ANALYSIS

4.1 Introduction

Recall the findings from Chapter 2. The fact that states are considered to be rational individuals causes them to not comply with the Kyoto Protocol. In theory this problem can be solved by the application of a grim punishment that – if it constitutes a sufficient deterrent – keeps the states from engaging in opportunistic behaviour. The empirical studies that evidence the non-compliance of several member states of the Kyoto Protocol, however, suggest that the *real-life* punishment does not deter too many states from defecting their respective obligations. Finally the analysis of how, hypothetically, the states would react if the interaction between the WTO and the UN was possible, revealed that the interaction would be preferable as it increases the states' incentives to comply with the Kyoto Protocol.

In Chapter 3 the possibility of referring to the Kyoto Protocol as a legitimate measure pursuant to Article XX of the GATT in order to justify a restriction of trade against a presumably non-complying state, was discussed. It was argued that the development in the judicial practice of the WTO indicates a positive attitude, albeit limited, towards non-trade factors, and that such non-trade factors also (should) include those that seek to protect the human health and life etc. The judicial bodies often disregard the non-trade factors stating that the application of such measures constitute arbitrary and/or unjustifiable discrimination or disguised restrictions on international trade. The refusal measure was captured by the broad scope of the chapeau, and the analysis points towards the same result as regards the less restrictive measure.

Coming to this point, it seems that the two analyses conducted so far both reach negative conclusions: International law does not at present allow the WTO to assist the UN in making its member states comply with the Kyoto Protocol. But the Kyoto Protocol does not create sufficient economic incentives for its member states to comply with it. I do believe, however optimistically or naively, that it is indeed possible to create a system of international law that takes better care of the climate. After all, it was argued that the protection of the climate as such might be included as a legitimate measure in accordance with GATT, Article XX. I do not strive for a definitive resolution to the problem. I intend, however, to carry on the debate about the two problems

illustrated in the past chapters, and seek to integrate them within one another in order to elucidate new paths and possible ways of making the two minuses become more of a plus.

One way of doing so is to identify the lowest possible common denominator that, if attained, might actually have a real shot at doing some good for the climate. In order to answer the overriding research question of this thesis,[96] I will propose a hypothesis consisting of four elements, which together constitute the lowest common denominator that might open up for a development in international law through which interaction between the WTO and the UN might become lawful in the future.

4.2 A Hypothesis

> A common denominator comprised of the fact that the WTO and the UN are, or transform into, constitutional democracies supporting the common rule of international law, the empowerment of citizens as well as common substantive virtues is a prerequisite for future interaction between the WTO and the UN.

In order to elucidate this hypothesis I initially attend to the separate parts of the common denominator, i.e. the common rule of international law, the empowerment of citizens and the common substantive virtues. I define their characteristics and determine why they are part of the common denominator, and accordingly how they depend upon each other. Eventually I attend to the concept of *constitutionalised democracies*, how they interact with the three concepts already defined and, finally, how far the WTO and the UN as of today have developed in this regard.

4.2.1 The Common Rule of International Law, the Empowerment of Citizens and Common Substantive Virtues

First of all, the common rule of international law consists of a plurality of elements: the *rule of law*, which is how one normally encounters the concept, the *common* and the *international* elements. In order to fully understand what is meant by this concept, let us dissect and reassemble it.

The *rule of law* is a political ideal. At a ground level it is an ideal according to which 'people in

[96] '*Under which prerequisites does the possibility for a member state of both the WTO and the Kyoto Protocol to restrict trade with a fellow member state in case of the latter' non-compliance with the Kyoto Protocol, constitute a legitimate measure in accordance with Article XX of the GATT?*'

positions of authority should exercise their power within a constraining framework of public norms rather than on the basis of their own preferences, their own ideology, or their own individual sense of right and wrong'.[97] On a higher level it offers 'legal certainty, predictability, and settlement, on the determinacy of the norms that are upheld in society, and on the reliable character of their administration by the state'.[98] This definition refers directly to *the state* as administer and protector of the rule of law. The prevailing anarchy within the international arena makes the rule of international law a bit more complicated. The lack of an international government does, however, merely comprise an obstacle – it does not render the emergence of the common rule of international law impossible. The increasing number of international organisations and their legal frameworks indicates a common intent among states to regulate international affairs. After all, states decide on their own whether or not they wish to join the organisations in question. This suggests that *legal certainty, predictability, and settlement, on the determinacy of the norms that are upheld in society, and on the reliable character of their administration* is also considered valuable in the *international society*. So, the intent of the states that have agreed to be part of such organisations and their legal frameworks is in its correct place. The trouble rests mainly with the element of *common.* Whereas the *rule of international law* is 'merely' concerned with the authority of law, the element of *common* raises the concept, as a whole, to a second level; it refers to a *common application* of the rule of international law on a global level. The international arena, being a playground (or battlefield?) with a plurality of emerging regimes that eventually comprise diverging political systems, does not facilitate the attainment of the *common* element. In fact, the first level exists as of today with no second level. It is showered with the political self-interest of states and, hence, different perceptions of the rule of law. National courts continuously define the 'rule of law' with no regard to international law, as no common rule of international law, applicable both nationally and internationally, has advanced.[99] Therefore, in order to satisfy the *common* element, the rule of international law should apply commonly in both national and international contexts, encouraging all lawyers and judges to cooperate on the promotion of the common rule of international law.

The common rule of international law is closely entangled with the concept of democracy and, hence, the empowerment of citizens. Contemporary globalisation permits and demands that the

[97] Waldron (2008) p. 5
[98] *Ibid.* p. 5
[99] Petersmann (2007) p. 533

arena of international law replaces the current 'society of states' with a 'society of persons'. The five circumstances under which sovereign states operate – scarcity of resources, shared geographical spaces, capacity to help and harm each other, non-altruistic behaviour of most people and the rise of disputes – apply at the international level as well. International organisations such as the WTO and the UN operate under these five circumstances, and these circumstances need to be dealt with in accordance with principles of justice in order to legitimise and control supranational governance.[100] I do not attempt a particular definition of *justice*, but refer mainly to the concept that (should) transform from being a national product to a global product,[101] manifesting itself (in this thesis) through democracy, which I hold to be a principle of justice. I restrict this analysis to democracy as a principle of justice. It is concerned with 'the role of the people in their governance: the right of persons in a political community to participate meaningfully in the process by which they define and implement values, priorities and policies'.[102] Ultimately, 'the democratic legitimacy of intergovernmental UN and WTO governance increasingly depend on transforming the power-oriented "society of states paradigm" into a more citizen-oriented paradigm of international law empowering citizens and addressing their common interests, common risks, and common responsibilities (…)'.[103]
Note that *legitimacy* is also the aspect of supranational governance that renders the decisions of the judicial bodies of the international organisations valid. The validity rests upon what the 'legal framework prescribes, both formally and substantially.[104]

The concepts of the common rule of international law, democracy (as a principle of justice) and legitimacy, are intertwined: 'the rule of law implies that courts -- applying legitimate law made by democratically-elected legislators (…) -- determine whether a proposed exercise of power is procedurally legitimate and accords substantively with fundamental rules of fairness agreed by the democratic process'.[105] Advancing the hypothesis I left out the concept of *legitimacy*, not due to its lack of importance compared to the residual three, but because legitimacy is embedded in the empowerment of citizens: It is democracy that legitimises the supranational governance.

The VCLT comprises a crucial tool for the emergence of the common rule of international law and

[100] *Ibid.* p. 532
[101] Garcia (2005) p. 1
[102] Franck (1999) p. 1
[103] Petersmann (2007) p. 532
[104] Franck (1999) p. 1
[105] *Ibid.* p. 2

a common perception of democracy as a principle of justice. The preamble prescribes: 'disputes concerning treaties, like other international disputes, should be settled by peaceful means and in conformity with the principles of justice and international law'.[106] Since the cited VCLT provision on treaty interpretation is generally recognised as being a codification of international customary law,[107] WTO law should also be interpreted in conformity with 'the principles of justice' etc. This is in particular underpinned by the wording of the DSU[108] that refers back to the VCLT, prescribing that the interpretation of the WTO agreements is to be conducted 'in accordance with customary rules of interpretation of public international law'.[109] The latter citation refers not merely to the common *formal* interpretative part of justice, but also to its common *substantive* part.[110] The common formal interpretative part of justice refers to the procedural justice, which (should) strive to emerge through mutual perceptions of the 'lawful conduct of state, of the systemic character of international law, and the mutual coherence of international rules and principles'.[111] It depends on the common rule of international law and the common perception of democracy as a principle of justice. The conduct of state, the systemic character of international law as well as the mutual coherence of international law and principles have no formal value if lawyers and courts do not apply international law in a common and consistent manner legitimised through democratic processes.

The common *substantive* interpretative part of justice refers to what virtues the WTO and the UN build on, be it independent third-party adjudication, non-discrimination etc.[112] On a general level this means that if the restriction on trade by one WTO member state against another member state, due to the latter's non-compliance with the Kyoto Protocol, is to become legitimate *substantively,* then, the WTO first of all needs to be able to refer to protection of the climate in its decisions and, ultimately, to render the direct referral to the Kyoto Protocol a measure not infringing Article XX of the GATT. Both organisations need to build substantively on a *common foundation*, which is highly aware of the immense importance of addressing and responding to climate change. They need to share core substantive values.

---

[106] Preamble of the VCLT
[107] Cameron and Gray (2001) p. 254
[108] Understanding on Rules and Procedures Governing the Settlement of Disputes
[109] DSU Art. 3 (2)
[110] Petersmann (2007) p. 533
[111] *Ibid.* p. 533
[112] Petersmann (2007) p. 533

The *formal* legitimacy of the interaction between the WTO and the UN requires a more thorough analysis of how the organisations and their legal frameworks co-exist, cooperate etc. The WTO and the UN must, first of all, comprise constitutional democracies that empower their citizens 'addressing their common interests, common risks, and common responsibilities (…)',[113] as supranational governance is legitimised through the empowerment of its citizens representing a principle of justice. The remaining section of the present chapter is occupied with such formal justice.

The substantive part was largely dealt with in the legal analysis conducted in Chapter 3. The present chapter, therefore, proceeds with the understanding of concepts of the common rule of international law and the empowerment of citizens, respectively and coherently.

4.3 The Common Rule of International Law

I stated already that the number of emerging international organisations and state associations is increasing. Similar to such increase is the number of judicial courts and tribunals that seek to settle disputes brought to it pursuant to the legal framework in question and, hence, enforce the rules and principles of the organisations. The multiplication of international judicial bodies, denoted the 'proliferation of adjudication', has even led to the rise of the Project of International Courts, a network of academics and practitioners studying international courts and tribunals and their impact on international law in general.[114]

4.3.1 The proliferation of adjudication

Some might argue that the international judicial bodies emerge in the absence of an overarching framework with no formal links between them or structural hierarchy to guide their operations;[115] some might characterise them as being 'self-contained systems'.[116] I shall illustrate here, though, that the general picture of proliferation of adjudication, to which the judicial bodies of the WTO and the UN have contributed, gives rise to 'emerging common approaches to questions of procedure and remedies in the jurisprudence of international judicial bodies (…)'.[117] Such approaches are further denoted *common law of international adjudication*.

[113] *Ibid.* p. 532
[114] Brown (2008) p. 219
[115] *Ibid.* p. 219
[116] *Ibid.* p. 220
[117] *Ibid.* p. 221

The possible emergence of a common law of international adjudication facilitates the emergence of the common rule of international law, which is part of the procedural and remedial justice in international law. It covers to some degree the above-mentioned *common* element of the rule of international law: The rule of international law is dependent upon the adjudicative system. Of course, the emergence of the common rule of international law is dependent upon the 'willingness of all actors in a political community -- citizens, corporations, unions, legislators, regulators, judges and national and local political leaders –',[118] but the incumbent judges of the international judicial bodies do represent important advocates and protectors of the *common* rule of international law. The judicial courts and tribunals are the ones that render decisions and advisory opinions based on international law that (ought to) feedback on the behaviour of states as well as non-state actors. They offer citizens 'judicial remedies for defending their *rights and interests*.'[119] As the interaction between the WTO and the UN is dependent upon the rule of international law as described in the previous section, and as the emergence of a common law of international adjudication facilitates the emergence of the common rule of law, the emergence of a common law of international adjudication might affect the possible interaction between the WTO and the UN indirectly. This section therefore concentrates on identifying obstacles as well as spurring catalysts in relation to the emergence of a common law of international adjudication and on how such obstacles and catalysts influence the possible emergence of the common rule of international law.

What obstructs the emergence of a common law of international adjudication?

The fact that the legal foundations of the respective international judicial courts and tribunals contain different agendas, procedures and functions might comprise an obstacle to the emergence of a common law of international adjudication.[120] The clear and detailed provisions contained in the statutes of the courts, which differ from the ones of the traditional international courts, should prevail over generally accepted rules of adjudication. This is directly derived from the formal interpretative principle of *lex specialis*.[121] The provisions of the DSU contain such clearly stipulated forms of procedure that are indeed different. They do not for instance allow third-party

[118] Franck (1999) p. 1
[119] Petersmann (2007) p. 529
[120] Brown (2008) p. 241
[121] Petersmann (2007) p. 533

intervention of states that are not members of the WTO,[122] or the interim review of panel reports, which are two generally accepted rules that most traditional international courts provide for.[123] The relationship between the court and its litigating parties might constitute a problem as well. The relationships might differ. If, on the one hand, a court's relationships to its parties vary, then the litigating approaches that are adopted might vary as well. If, on the other hand, the court's relationships to its parties do not vary, then the same approach is likely to be adopted regardless of the parties in question.[124] In any case, when both possibilities are likely, it does impose a certain degree of uncertainty to the legal proceedings and, hence, an even more serious need for imposing a common rule of international adjudication among international regimes.

What spurs the emergence of a common law of international adjudication?

Legal scholars have pointed to the fact that the proliferation of judicial courts and tribunals might not only impose obstacles to the emergence of a common law of international adjudication. In fact, they argue that the proliferation gives rise to some cross-fertilisation of principles (relating to procedural rules and remedies) in the jurisprudence of international judicial courts and tribunals.

The drafting of the legal foundations, respectively, might have similarities – and not only undermining variations, as mentioned earlier. Such similarities suggest that the provisions of the legal foundations apply in the same way.[125] Also, the concept of precedent might hold some importance in the development of a common law of international adjudication. A precedent arises when one court is presented with a particular legal issue and substantiates its resolution of such issue on how other judicial bodies have dealt with such issues formerly. The doctrine of precedent *stare decisis* is not generally accepted in international law, and, indeed, the Statute of the ICJ explicitly states that the decision of the court 'has no binding force except between the parties and in respect of that particular case'.[126] However, depending on the persuasiveness of the court's reasoning, it can be argued that other courts will adopt a similar approach or at least will be encouraged to do so.[127]

Common treaty interpretation also has a facilitating bearing on the emergence of a common law of

[122] DSU Art. 10:1 vis-a-vis the Statute of ICJ Art. 62:1
[123] Brown (2008) p. 240
[124] *Ibid.* p. 242
[125] Brown (2008) pp. 292-230
[126] Statute of ICJ Art. 59
[127] Brown (2008) pp. 230-231

international adjudication. Development in international law has evidenced that international courts tend to agree on certain common approaches when interpreting treaties, even regardless of differences in wording. The existence of VCLT article 31(3)(c) allows the international courts to consider the decisions, including reasoning and interpretations etc., given by other international judicial bodies, stating that '[t]here shall be taken into account, together with the context (…) any relevant rules of international law applicable in the relations between the parties'.[128] The principle of effectiveness and the evolutionary approach also constitute approaches adopted for the sake of a common ground of international litigation.

Judicial courts and tribunals seated by *independent, tenured judges*, who promote not only the interests of states but also the interests of citizens, additionally promote the common rule of international law and have the incentives to do so through consistent judicial practices and predictable interpretations. The fact that such judges are representatives of certain regimes of functionally defined fields, e.g. international trade, provides them with incentives to deliver better-informed judgements and to promote long-term cooperation – not only coexistence – among the regimes. Additionally, and closely linked to the fact that the independent tenured judges act as representatives of their regimes, the public availability of the proceedings and judgements delivered by the judicial bodies largely constrains any possible incentives that judges might possess for abusing the self-same independence. The fact that judges act independently facilitates the cooperation with *national* courts by lowering tension among sovereign states, who accordingly exert pressure on national governments to take into account the decisions delivered by the international courts.[129] Bringing the international law into the national sphere is crucial to the emergence of the common rule of international law. National and international judges need to cooperate in order to ensure the lowering of national interest and to propel the interpretation of citizen-oriented international economic law 'in conformity with principles of justice and international law, as explicitly prescribed in the Vienna Convention on the Law of Treaties (…)'.[130]

Clearly, the multiplication and proliferation of international judicial courts and tribunals point to factors that both obstruct and facilitate the emergence of a common law of international adjudication. And of course one has to be aware of both. However, the list of facilitating factors is

[128] VCLT Art. 31:3(c)
[129] Petersmann (2007) p. 542
[130] *Ibid.* p. 529

clearly longer, and they do indeed illustrate how the proliferation of international judicial bodies facilitates the development of the unifying ingredient in international litigation that takes part in the emergence of the common rule of international law. Also, the obstructing factors are not so severe and fatal that they outdo the catalysts. Therefore, the proliferation of adjudication viewed in combination with the independent judges tenured in order to hold the fort, which constitutes a plurality of regimes, is preferable.

So far I have concluded that the proliferation of judicial courts and tribunals mainly spurs the emergence of a common law of international adjudication and that such common law of international adjudication facilitates the emergence of the common rule of international law, which presumably is a prerequisite for the interaction between the WTO and the UN.

4.4 Summing up

Recall that it is the common rule of international law, facilitated by the emergence of a common law of international adjudication, and the common perception that democracy is a principle of justice, which legitimise and control the supranational governance of the WTO and the UN. This means that if the law substantively develops in such a way that climate change is placed higher up on the agenda, it might be possible to allow for the interaction between the WTO and the UN, given that *international law is applied commonly among national and international lawyers and judges, and given that law is a product of democratic processes empowering its citizens and their interests.*

If the WTO and the UN comprise constitutional democracies, they will empower their citizens, and this is what legitimises their supranational governance. However, to reach such a point all national and international lawyers have to come together to promote the common rule of international law. Common substantive virtues might evolve on the basis hereof, placing much greater emphasis on the immense importance of responding to and addressing climate change. If the WTO and the UN can reach a common denominator then direct referral to the Kyoto Protocol might be possible. Applying a trade restriction against a fellow member state with direct referral to the latter's non-compliance with the Kyoto Protocol will have a far better shot at 'making it' as a lawful measure pursuant to Article XX(b) and, in particular, the chapeau.

In order to assess the odds of such a development, let us take a look at the WTO and the UN,

respectively, in order to investigate how *democratic* the organisations really are today. The assessment takes as its point of departure the concepts of constitutionalism and legal pluralism. In order to explain the importance of such concepts and their relation to one another, to democracy and to the interaction between the WTO and the UN in particular, I shall begin this section with defining the two concepts.

4.5 The Empowerment of Citizens

4.5.1 Constitutionalism

A constitution is a body of fundamental principles or established precedents according to which a state agrees to being governed. The definition of a constitution includes the application of meta-norms: 'those higher-order legal rules and principles that specify how all other lower-order legal norms are to be produced, applied, enforced, and interpreted'.[131] These higher-order legal rules and principles constitute, according to H.L.A. Hart,[132] *secondary* rules that together with the *primary* rules, which confer rights and obligations upon people and regulate their behaviour,[133] constitute a legal system. The secondary rules are 'means of adapting norms to changing circumstances and of resolving disputes about the existence, and hence the validity and authority, of norms'.[134] They establish the institutions within the constitutionalised regime and their respective division of powers. They grant them the authority to make, apply and enforce as well as to interpret the laws.[135] And at the same time, they constrain governments in the sense that they include safeguards of citizens' rights against disproportionate and illegitimate government intervention. This is done through the establishment of constitutional courts seated by independent, tenured judges.[136]

It is uncontested that various states, domestically, operate under such constitutional systems in which they organise themselves, and each system has within it 'a higher law that frames, organises and limits the public power exercised (…)'.[137] Although the definitions of a constitution in the domestic and international realms might appear to be similar, the debate about the latter

---

[131] Stone Sweet (2009) p. 626
[132] H.L.A. Hart (1907-1992) was a British jurist and legal philosopher. He was deeply engaged in the debate about legal positivism and was mainly known for his great work *The Concept of Law* (1961).
[133] Stone Sweet (2009) p. 625
[134] *Ibid.* p. 625
[135] *Ibid.* p. 626
[136] *Ibid.* p. 626
[137] Krisch (2009) p. 12

implies something completely different. Some international lawyers state that constitutions are something that is limited to the domestic sphere alone. In the course of this section it will become apparent that such a narrow nationalist viewpoint is not shared.

4.5.2 Legal Pluralism

With that being said, let us for a moment turn to what is at first glance considered to be placed at the other end of the 'constitutional scale': legal pluralism. Legal pluralism is the existence of multiple legal systems within one and the same geographically determined area. In this case the geographical area constitutes the entire world within which functionally defined international regimes emerge. Obviously, the WTO (trade) and the UN (peace, friendly relations among nations, poverty alleviation) are examples of such regimes. Some scholars claim that legal pluralism is inversely proportional to a constitutionalised system; the greater extent of legal pluralism within a geographically determined area, the lesser likelihood of spotting any constitutional structures, they argue. They hold that the hierarchal structure of a constitution, which offers one integrated regime with one set of meta-norms, opposes legal pluralism, suggesting that no set of meta-norms exists beyond the pluralism and therefore offers no 'system' at all.[138]

Other scholars, though, do not go as far as to claim inverse proportionality between the two concepts. On the contrary, they argue that legal pluralism and constitutionalism can and do coexist. In fact, they claim that the two concepts are intertwined. The way in which they are intertwined depends on whether the overarching frame of the system is either plural or constitutional in nature. While some legal scholars advocate that constitutional hierarchies develop within a system preconditioned by pluralism, other legal scholars advocate an originally constitutional system from which a plurality of constitutional hierarchies emerges.[139]

I will argue that the concepts of legal pluralism and the constitutional hierarchy are not mutually exclusive concepts. On the contrary, they are highly integrated within one another, and the WTO and the UN are international regimes within an 'overarching normative frame (…)'.[140] This overarching normative institution includes a plurality of constitutional hierarchies that emerge domestically, regionally and internationally. It includes a higher law of legal meta-norms

[138] Stone Sweet (2009) pp. 631-632
[139] *Ibid.* pp. 632-633
[140] *Ibid.* p. 632

comprised i.e. of the common rule of international law, the common perception of democracy as a principle of justice and common substantive virtues. Therefore, the common denominator put forth in the hypothesis and analysed so far in the previous and present chapters constitutes a normative framework enabled through the rise of constitutionalised democracies responding to such framework. The plurality of constitutional hierarchies is further denoted *constitutional pluralism*.[141]

4.5.3 Defining the Constitutionalised Democracy

The definition of constitutional pluralism allows for a plurality of constitutional hierarchies to emerge. A constitutionalised democracy is defined as a regime that both empowers its citizens through democratic processes and implements a structural hierarchy, including a constitutional court, in order to safeguard the rights and obligations of the citizens and to both legitimise and control the governance of the supranational bodies. A plurality of constitutional democracies therefore shares the same formal and substantive virtues, which accordingly gives rise to the overarching normative framework as described above. It is the emergence of constitutional democracies that enables and supports the common rule of international law, the common perception of democracy as a principle of justice and common substantive virtues. If the WTO and the UN are to be defined as constitutional democracies – enabled to govern side by side through the recognition of the concept of constitutional pluralism – they inherently accept and respond to an overarching normative institution of meta-norms that per definition are comprised of the common rule of international law, the empowerment of citizens as well as common substantive virtues.

4.6 Constitutional Pluralism vis-à-vis the WTO and the UN

4.6.1 Is the WTO constitutionalised?

The GATT is the predecessor of the WTO. It is a multilateral agreement aiming to regulate international tariffs and trade. The agreement was established solely through the voluntary consent of states, striving for intergovernmental cooperation in the field of international trade. All things being equal, an intergovernmental agreement is an agreement between its member states. It is first and foremost created *for its members.* Such an agreement constitutes a major asset for the liberalisation and facilitation of international trade in general. However, since the members of

[141] Stone Sweet (2009) pp. 632-633

the GATT range from developing and transitioning economies to capitalised world leaders this member-driven governance of international trade might cause problems. When all decisions are to be made merely through the member states, it might well turn into a power-based regime concerned primarily with national interests. The multilateral trade negotiations would focus mainly on the export interests of the highly developed industrialized states and on the interpretation of the GATT as a 'self-contained regime' separate from the UN.[142]

With the establishment of the WTO the structure surrounding the regulation of international trade changed. One might say that the horizontal power-based regime of the intergovernmental agreement of the GATT changed into a somewhat vertical multilevel, hierarchal structure. The establishment of the DSB - the organisation's dispute settlement system, particularly underpins this. The DSB, including the Appellate Body constitutes a compulsory system of adjudication, alluding to the fact that the member states of the WTO are formally compelled to settle any dispute pursuant to the provisions of the covered agreements as set forth in Annexes 1 and 2 of the DSU.[143] According to the DSU the dispute settlement system 'is a central element in providing security and predictability to the multilateral trading system'.[144] In cases where one member state formally complains about the conduct of a fellow member state, judiciary panels are established unless the parties are successful in mediating the disputes themselves. The panels are composed on a case-to-case basis and seated by well-qualified panellists 'selected with a view to ensuring the independence of the members, a sufficiently diverse background and a wide spectrum of experience'.[145] Citizens of member states whose governments are party to a dispute 'shall not serve on a panel concerned with that dispute, unless the parties to the dispute agree otherwise'.[146] Additionally, the fact that the panellists are required to serve in their individual capacities and neither as government representatives nor as representatives of any organisation restricts the member states from giving the panellists instructions and from seeking to influence them as individuals.[147]

Indeed, the creation of a judicial court seated by independent, tenured judges limits the risks related to the former intergovernmental power-based regime of the GATT. Note, however, that

[142] Petersmann (2007) p. 531
[143] DSU Art. 1:1 & 2
[144] DSU Art. 3:2
[145] DSU Art. 8:2
[146] DSU art. 8:3
[147] DSU Art. 8:9

the composition of the Appellate Body differs from the composition of the panels. Judges seating the Appellate Body, counting seven, are elected for 'a four-year term, and each person may be reappointed once'.[148] The four-year term may risk compromising the independence of the judges to some degree, as the timeframe opens up for special relationships to emerge between judges and certain litigating states. It seems, however, that this problematic is somewhat remedied by the procedure of rotation prescribed in Article 17: Out of the seven judges elected for the Appellate Body merely three serve on any one case, and they serve in rotation.[149]

The development in international trade law points to a move towards a system that seeks to protect and promote international trade on a higher level. It is not only dominated by the protection of national interests. It is also occupied with the protection of its citizens.[150] This suggests a structural step towards a constitutional architecture of international trade law, and the establishment of the DSB including the Appellate Body does indeed comprise valuable factors in determining whether or not the WTO comprises a constitution.

Some facts have, it seems, pointed towards a constitutionalisation of the WTO: the agreement establishing the WTO and its compulsive system of adjudication in particular. Stone Sweet states that '(…) the legal systems of certain treaty regimes, especially those of the EU, the ECHR, and WTO, are constitutional; they are constituted, like the systems of virtually all nation-states today, by written meta-norms or codified secondary rules. Further, these regimes are built on a normative foundation that is very similar to higher-law constitutions. The highest courts of each of these systems exercise compulsory jurisdiction over disputes that arise under their respective treaties and their authority to interpret and apply the regime's law is final. These courts are powerful constitutional courts'.[151]

I agree, but do, however, restrict myself from concluding that the WTO comprises a quasi-constitutional polity that creates, interprets and enforces rules and norms by means of a dispute settlement system seated by independent panellists – not only in order to protect international

[148] DSU Art. 17:2
[149] DSU Art. 17:1
[150] Petersmann (2007) p. 531
[151] Stone Sweet (2009) pp. 630-631

commerce, but also with the immense importance of, for instance, human life, the conservation of exhaustible natural resources etc. in mind.[152]

4.6.2 Is the UN constitutionalised?

The International Court of Justice (further denoted the *ICJ*), established by the UN Charter, constitutes the principal judicial organ of the UN.[153] All members of the UN are *ipso facto* parties to the Statute of the ICJ,[154] and they are, of course, required to comply with all ICJ rulings to which they are parties.[155] However, the ICJ only accepts *states* as parties to cases before it.[156] Corporations, organisations, UN bodies etc. are, therefore, excluded from being (direct) parties to cases proceeding under the jurisdiction of the ICJ. Also, and very importantly, the jurisdiction of the ICJ is based on state consent, which means that the states parties to a dispute need to give their consent to the jurisdiction of the ICJ. If they do not, the dispute will not proceed before the ICJ. Ultimately this means that the ICJ has no *compulsory* jurisdiction.[157] Article 36 does, however, provide for grounds other than consent that the referral of cases to the ICJ may be founded. Article 36 prescribes:

> '1.The Jurisdiction of the Court comprises all cases which the parties refer to it and all matters specially provided for in the Charter of the United Nations or in treaties and conventions in force.
> 2. The states parties to the present Statute may at any time declare that they recognize as compulsory *ipso facto* and without special agreement, in relation to any other state accepting the same obligation, the jurisdiction of the Court in all legal disputes concerning:
> a. the interpretation of the treaty;
> b. any question of international law;
> c. the existence of any fact which, if established, would constitute a breach of an international obligation;
> d. the nature or extent of the reparation to be made for the breach of an

[152] GATT Art. XX
[153] Statute of the ICJ Art. 1 and the UN Charter Art. 92
[154] UN Charter (1945) Art. 93:1
[155] UN Charter (1945) Art. 94:1
[156] Statute of the ICJ Art. 34:1
[157] Posner and Figueiredo (2004) p. 7

international obligation. (…)

5. Declarations made under Article 36 of the Statute of the Permanent Court of International Justice and which are still in force shall be deemed, as between the parties to the present Statute, to be acceptances of the compulsory jurisdiction of the International Court of Justice for the period which they still have to run and in accordance with their terms'.

Although the Statute of the ICJ provides for compulsory jurisdiction under some specified circumstances, it is, still, primarily based on state consent, which reduces the credibility of claims that the ICJ is a constitutional court in the same way as the DSB of the WTO. Accordingly, it reduces the possibility of stating that the UN, as a whole, is a constitutionalised regime.

As regards the composition of the court, the judges of the ICJ, counting fifteen, are elected for nine years with the subsequent opportunity to be re-elected.[158] Even though '(t)he Court shall be composed of a body of independent judges, elected regardless of their nationality from among persons of high moral character, who possess the qualifications required in their respective countries for appointment to the highest judicial offices, or are jurisconsults of recognized competence in international law',[159] the nine (or more) years in which the judges seat the court might spoil or reduce their independence. It is likely that special relationships – for good or bad – may emerge between judges and certain states. In fact, empirical studies suggests that the judges of the ICJ do tend to favour their home states or similar states, mainly based on similarities in GDP per capita,[160] similar membership of for instance the EU and the OECD, language or religious beliefs.[161] If the court's relationship to its parties varies, the litigating approaches that are adopted might vary as well. Despite the fact that '(j)udges of the nationality of each of the parties shall retain their right to sit in the case before the Court',[162] the nine-year term still seems to constitute a risk compromising the independence of the judges to some degree.

4.6.3 Do the WTO and the UN Comprise Constitutional Democracies?

I have already established the fact that the WTO has developed into a quasi-constitutional polity.

[158] Statute of the ICJ Art. 13:1
[159] Statute of the ICJ Art. 2
[160] Posner and Figueiredo (2004) p. 21
[161] Posner and Figueiredo (2004) p. 19
[162] Statute of the ICJ Art. 31 (1)

The WTO agreement and its compulsory system of adjudication seated by presumably independent judges demand for both formal and substantive justice in accordance with customary rules of interpretation of public international law. It points towards a regime that strives to reduce the power play of nations and replace it with a greater emphasis on the interests, risks and responsibility of its citizens. Indeed, Petersmann states that '(s)ince the WTO Ministerial Conference at Seattle (1999), WTO negotiations are increasingly influenced by civil society and parliamentary pressures to make WTO negotiations more transparent and more responsive to general citizen interests'.[163] The WTO is still criticised, though, for being too focused on liberal values. Some WTO diplomats even defend the intergovernmental structures that continuously place all decisions in the hands of government representatives.[164]

The UN might to an even greater extent comprise a liberal international regime with a predominant emphasis on sovereign interests. Former UN Secretary-General Kofi Annan expressed concern about such development and its alleged consequences, stating that 'the power-oriented international legal system and many intergovernmental UN bodies are widely perceived today as "unjust, discriminatory and irresponsible" because they failed to effectively respond to the three global challenges to the UN (…)'.[165] The three global challenges consist of ensuring a just world economy, a new world order of peace and freedom and protecting human rights, dignity and rule of law.[166] Additionally, empirical studies suggest that judges of the ICJ vote impartially in favour of their home states ninety per cent of the time. And if no home state is party to the case, the judges tend to vote in favour of states that are similar to their respective home states.[167] The data indicates that the dispute settlement system of the UN does not work well enough to ensure the independence of its judges, supported by the nine-year period through which they seat the court. Furthermore, the fact that the jurisdiction of the ICJ is primarily based on state consent deprives the court of being defined as a constitutional court. So, regardless of what comes across as pure aims for peace, friendly relations among nations, poverty alleviation etc., not much seems to evidence a UN that seeks to fight off and transform the power-oriented 'society of states paradigm' into a more citizen-oriented paradigm of international law empowering citizens and

[163] Petersmann (2007) p. 532
[164] *Ibid.* p. 536
[165] *Ibid.* p. 530
[166] Petersmann (2007) p. 530
[167] Posner and Figueiredo (2004) p. 28

"addressing their common interests, common risks and common responsibilities (…)"[168] For this reason it would be going too far to state that the UN comprises a constitutional democracy of compulsory jurisdiction striving to empower its citizens.

4.7 Summing Up

The diversities of regimes bring about a string of legal implications that threat to undermine legal certainty and transparency and to render possible conflicting judgements and interpretations of international law due to the lack of the common rule of international law. This affects negatively on the emergence of the common perception that democracy (and, hence, the empowerment of citizens) is a principle of justice as well as on the emergence of common substantive virtues. In order to avoid this, the endeavour for the common rule of international law, the empowerment of citizens and common substantive virtues seems even more imperative. Together they comprise the lowest denominator required if one is to hope for a future development that will eventually let the WTO and the UN interact for the protection of the climate.

I shall argue in this final part of the present chapter that the common denominator also (indirectly) takes part in rendering the interaction between the WTO and the UN efficient pursuant to the criterion of Kaldor-Hicks. For one thing, of all the foregoing reasons given, it seems unlikely that the interaction is possible as long as the common denominator is not set. Even if the interaction were allowed without the emergence of a common denominator it would still seem unlikely that the interaction would promote legal certainty due to the lack of common values, common application and interpretation of international law: in such case the interaction might cause more legal uncertainty about what is allowed and not allowed since there is no common ground to unite the two legal systems. Accordingly, the enforcement of such interaction might cause trouble. Therefore, the interaction would not even *emerge* if the common denominator were not in itself emerging.

4.8 The Kaldor-Hicks Criterion

Generally the Kaldor-Hicks criterion is applied in order to examine whether or not a certain rule or regulation is socially efficient. A rule or regulation is, pursuant to the principle, said to be socially efficient if those, who are made better off because of the implementation of the rule, can

[168] Petersmann (2007) p. 532

compensate those, who are made worse off. The compensation merely has to be theoretical, i.e. no actual exchange of compensation has to take place.[169]

Conducting a cost-utility analysis, which is based on the Kaldor-Hicks criterion, in order to spot the winners and losers, one has to be aware of the fact that it is the *individuals,* who are in focus. Usually the criterion is inapplicable to *nature*, i.e. it is the degree of utility and costs inflicted to the *individual* winners and losers that is of interest. However, it doesn't follow from such focus that the nature cannot be the point of departure. If it is assumed that the individuals put value on *nature* then a rule affecting the nature, will indirectly affect the individuals, who thereby become winners and losers in the sense of the Kaldor-Hicks criterion.[170]

4.8.1 The Winners

Citizens stand as the superior winners. If interaction between WTO and UN is possible it is because, as was just argued, development has occurred, which, further, has facilitated the emergence of a common denominator for the two international organizations. The interaction would primarily work in favour of citizens as they are indeed empowered through the common denominator. Accordingly, citizens would benefit from the interaction, as the amount of CO^2 emissions would decrease pursuant to the Kyoto Protocol, which would throw off a series of consequences for the better of the Earth and accordingly, on human health and life. Of course, this argument only holds under the assumption that citizens – people in general – value the preservation of human life and health, and such value is both "vital and important in the highest degree."[171] Note that the interaction between the WTO and the UN would, in particular, positively affect the citizens residing the states most vulnerable to climate change, for instance the least developed countries that are at high risk of getting fatally struck by extreme weather conditions that rise in the wake of climate change.

If the states are aware of the fact that a fellow state might restrict trade with them in case of their non-compliance with the Kyoto Protocol, this will, as shown above in the extended grim trigger strategy, provide a greater incentive for the state to comply with their respective obligations. In order to *enable* such compliance, the states will preferably engage in (extra) research and

[169] Eide and Stavang (2008) p. 110-111
[170] *Ibid.* p. 115
[171] *Asbestos case*: Report of the Appellate Body (2001) VII.B.172

development of, for instance, production methods etc. that are both "green" and cheap. If the states are successful in developing such methods, they will be able to reduce their long-term production costs. This benefits, of course, not only the states as such. It benefits also the corporations, both governmental and non-governmental.

Naturally, the emergence of a common denominator among the WTO and the UN that renders possible the interaction between them, is desirable to every one affected by the climate, given that the interaction positively affects the states by means of creating incentives for them to comply with their obligations pursuant to the Kyoto Protocol. Accordingly, we are all winners. We are all affected by the climate. And it is not only *us* – today, it is also our descendants in the future.

4.8.2 The Losers

One might argue that the interaction between the WTO and the UN might bring about more disputes between states and, hence, more costs. And true, even though the organizations reach a common denominator that eventually, inter alia, empowers citizens, states might still wish to wipe the true quantities of greenhouse gas emissions under the carpet to make the numbers look better. Note that if the states deliver sufficient results they will have an excess of *assigned amount units* (further denoted *AAUs*) to sell off pursuant to the emissions trading scheme of the Kyoto Protocol: States listed in Annex B of the Kyoto Protocol have agreed to specific targets for reducing their level of emissions of the greenhouse gases listed in Annex A. These targets comprise the states' respective *assigned amounts,* i.e. the amount of greenhouse gases that the states are allowed to emit during one commitment period. The assigned amounts are divided into AAUs, and these can be traded among the states according to Article 17 of the Kyoto Protocol. A state in excess of AAUs (i.e. he reduces his level of greenhouse gas emissions *more* than the requirements prescribe) may transfer the excess amount to a state that encounters a deficit of AAUs, i.e. a state that emits too much than required of him. This scheme is known as the protocol's emissions trading scheme. Note that it is not only AAUs that are traded, though.[172]

[172] Removal Units (RMUs), Emission Reduction Units (ERUs) and Certified Emission Reduction units (CER) are all tradable units. RMUs refer to units acquired through the LULUCF scheme, which inter alia is concerned with land-use and forestry. ERUs refer to units acquired through the Joint Implementation projects, cf. Article 6. CERs refer to units acquired through the Clean Development Mechanism, cf. Article 12.

Although the states are required to report their respective levels of emissions, and that the UN has the right to monitor such, it still is for the sovereign states to decide what to reveal. The "market" for CO^2 emissions is not the easiest one in which to ensure perfect information among its actors. In such situation, if one state has a presumption that a fellow member state is not complying with its obligations as set forth in the Kyoto Protocol, there is - by means of the interaction between the WTO and the UN - a possibility to invoke trade restrictions against the non-complying state, but it is still very difficult to prove.

Additionally, it can be argued that states in general will suffer more costs, when they are required to comply with the Kyoto Protocol. They would have to engage in comprehensive research for one thing. Another thing is the performance in practice; the implementation of the production methods etc. that contributes to the reduction of the CO^2, and accordingly the compliance with the Kyoto Protocol. I referred to such additional costs associated with compliance in Chapter 2, listing some of the policies and measures that the protocol in Article 2 suggests that the states develop and implement. These costs, however, are primarily related to the short-term costs. It is reasonable to believe that as soon as the productions methods etc. are implemented the costs associated with the "green" production will decrease.

4.8.3 The Compensation

The Kaldor-Hicks criterion rests on the assumption that the rule in question (here, the interaction between WTO and UN) is only an efficient rule if the winners can compensate the losers for their alleged losses.

The interaction will have positive implications for citizens as well as states as such and their corporations. In fact, I argue that what the winners receive will be more than enough to compensate the losers. The extra costs incurred by states in an increasing number of disputes will be relatively small compared to the benefits that they concurrently receive through a reduction in the health- and life-threatening risks associated with climate change by means a greater degree of compliance with the Kyoto Protocol. The same goes for the extra costs that the corporations encounter in relation to, in particular, research and development. Although states and corporation are likely to continue doing research and development in this field, it is likely that the heavy costs associated with, for instance, the implementation of production methods that *over time* will render the production more "green" and cheap, are primarily a short-term incurrence. As the

benefits that are received from a greater degree of compliance with the Kyoto Protocol reach all the way into the future it is safe to say that the losers are more than well compensated for the loss they suffer today and on a short-term basis.

4.9 Sub-conclusion

It has been argued throughout this analysis that the WTO has, to some extent, put more emphasis on its citizens and has indeed taken upon itself a quasi-constitutional hierarchy. However, it is still criticised for not being as democratic as it claims to be. This is mainly so because of diplomats and state representatives promoting a power-based system with emphasis on national interests. Although it is also held to be an organisation building on clear democratic values, the UN is not believed to act out such values in real life – at least not to an extent that offers citizens participatory influence. The quasi-constitutionalised WTO, therefore, exists side by side with the UN that continuously appears to constitute a liberal international regime competing over power and mainly with national interests in view.

Such diversities of regimes blunt the development of the common rule of international law. The common rule of international law is what ensures the common application of law, i.e. through common treaty interpretation in accordance with the provisions of the VCLT. However, as the assessment of the WTO and the UN, respectively, evidences two organisations that do not respond to a common overarching framework, the common application and interpretation of their legal foundation and regulations etc. are put at risk. Also, the fact that the independence and impartiality of judges, in particular those seating the ICJ, do not seem to be ensured in international litigation may cause the emergence of the *common* element to be curbed.

The diversities that blunt the common rule of international law accordingly spoil the empowerment of citizens.[173] Ultimately one might view such diversities of regimes as diversities in core values that constitute a serious hindrance of the empowerment of citizens on a global level; this calls for cooperation of both national and international lawyers and judges. 'Without such common conceptions of rule of law, national judges are likely to continue ignoring WTO dispute settlement findings that WTO guarantees of freedom, non-discrimination, and rule of law should be respected by all domestic government institutions for the benefit of their citizens'.[174]

[173] Petersmann (2007) p. 535
[174] *Ibid.* p. 551

Recall that it is the empowerment of citizens by means of transforming the international society into a 'society of persons' (contrary to a 'society of states') that legitimises and controls supranational governance. Ultimately this is what freezes the intergovernmental structures at the expense of a citizen-oriented democratically legitimised supranational governance.

Accordingly, the promotion of common substantive virtues, including the promotion of human rights, is obstructed. I did, however, argue that it is not too controversial to state the WTO might conclude that the protection of the climate (and indirectly the referral to the Kyoto Protocol) is a lawful measure in accordance with Article XX, in particular sub-paragraph (b), of the GATT. The possibility of a direct referral to non-compliance with the Kyoto Protocol by means of Article XX (d) and (g) is still severely obstructed by the lack of a common denominator to the WTO and the UN. As the regimes and the overarching frameworks of the WTO and the UN differ, one cannot argue that the common rule of international law benefits much. And as this opens up for different applications and interpretations of international law, it seems unlikely that the regimes should agree on substantive virtues.

CHAPTER 5

5.1 Conclusion

In the economic analysis, I argued that the Kyoto Protocol, by itself, although it strives towards a social optimum, does not create sufficient incentives for its member states to comply with their obligations to reduce their respective levels of CO^2 emissions. I argued that if the commitment periods, on which the Kyoto Protocol is based, are revoked, the states will consider the choice between compliance and non-compliance as part of an infinitely repeated game. In order for such alteration to be successful in creating incentives for the states to comply with the Kyoto Protocol, the Kyoto Protocol needs to introduce a sufficient deterrent that keeps the states from engaging in opportunistic behaviour that will eventually lead the states back to non-compliance. This was illustrated by means of the grim trigger strategy. However, the hypothetical situation in which the interaction between the WTO and the UN is made possible serves to illustrate how the deterrent might be even more effective in preventing the states from adopting a strategy of non-compliance. Given the possibility to restrict trade with a fellow member state of both the WTO and the UN through the WTO dispute settlement system, the complying states have the opportunity to render the punishment even grimmer than in the 'original' grim trigger strategy.

The economic analysis points to the fact that the compliance mechanism of the Kyoto Protocol is not successful in deterring its member states from non-compliance. But it does, additionally, point to the fact – given that the commitment periods of the Kyoto Protocol are revoked – that the dispute settlement system of the WTO might assist the UN in creating greater economic incentives for the member states to comply with their obligations to reduce their respective levels of CO^2 emissions. Such economic conclusion makes it highly interesting to examine the legal aspects of such interaction between the WTO and the UN. I therefore took a dive into Article XX of the GATT, which is the article most likely to have potential to exempt the trade restrictions from being considered unlawful measures falling under the scope of the remainder provisions of the WTO-covered agreements. Applying a variety of rulings rendered by the panels and the Appellate Body of the Dispute Settlement Body, it became evident that Article XX(b) to some extent matches the measure in question. Article XX(b) prescribes that the adoption and enforcement of measures necessary to protect human, animal or plant life or health should not be prevented by the GATT. It was argued that if one state restricts trade with a fellow member state based on the latter's non-compliance with the Kyoto Protocol, then such trade restriction could be exempted from the GATT

as a lawful measure (indirectly) necessary to protect human health and life, whose preservation by means of reducing or eliminating the life-threatening risks associated with extensive, uncontrolled and unregulated CO^2 emissions constitutes a value and interest both vital and important in the highest degree. This, however, was based on a *less restrictive measure* compared to a refusal measure. Finally, it was argued that the less restrictive measure might constitute arbitrary or unjustifiable discrimination due to (and greatly influenced by the vague definition applied) the possible severe economic consequences of such a measure for the states in question. At least, this is what the judicial practice suggests.

Consumed by the wish to spot an opportunity for international law to develop in such a manner as to approach and respond to climate change, and in particular to compliance with the Kyoto Protocol to a greater extent than what is seen today, I engaged in a discussion based on the respective findings of the economic and legal analyses. Initially, a hypothesis was advanced that prematurely claimed that in order for the interaction between the WTO and the UN to be possible in the future, then the two international organisations need to develop a common denominator serving to ensure a common ground of core values, both formally and substantively. I argued that such common denominator consists of the common rule of international law, the empowerment of citizens, which requires the common perception of democracy as a principle of justice, and, finally, common substantive virtues. National and international judges need to cooperate in order for international law to be applied commonly, thereby creating i.a. a greater extent of legal certainty. The common rule of international adjudication that has emerged as a result of the ongoing proliferation of international courts and tribunals indicates, however, that the political ideal of *rule of law* might be within future reach depending on national and international lawyers' and judges' commitment and ability to cooperate in applying and interpreting international law commonly. The increasing levels of economic and political interdependence of states and the usage of the word *globalisation* call for constitutional courts that can ensure the common application, interpretation and enforcement of international law. The supranational governance is legitimised through the empowerment of citizens. Regimes of supranational governance refrain from the power-oriented paradigm and seek to address to a much greater extent the interests, risks, responsibilities etc. of its citizens. Although not complete, the development of the WTO constitutes a fine example of a development moving towards constitutional democracy. A general overview of the development of the UN, on the other hand, still seems to evidence a development lagging behind in this regard. If the two mastodons in the field of international law do not find

common ground in developing into constitutional democracies empowering their citizens, the interaction between their respective legal frameworks will accordingly be difficult. It seems that their political structures obstruct the emergence of common substantive values. And it is these substantive values that are supposed to look after the climate to a greater extent than what is observed today. For those reasons, I am not surprised to conclude that the WTO, at present, is not able to assist the UN is creating *real* incentives for the member states to comply with their obligations to reduce their respective levels of CO^2 emissions pursuant to the Kyoto Protocol. Failing to develop - in particular the UN – into constitutional democracies, the international organisations of the WTO and the UN will additionally fail to create common substantive values that will apply and be enforced in a common manner throughout the global society at the expense of an interaction between the WTO and the UN, which would have constituted a socially efficient 'initiative' in accordance with the Kaldor-Hicks criterion. However, the emergence of a common denominator consisting of the above four elements, i.e. the WTO and the UN developing into *constitutionalised democracies* supporting *the common rule of international law, the empowerment of citizens and common substantive virtues*, has what it takes to alter the present situation in which the interaction is not possible. The four elements comprising the common denominator are the prerequisites for such development to occur.

BIBLIOGRAPHY[175]

Legislation

- Agreement Establishing the World Trade Organization. Marrakesh, 15 April 1994
- Charter of the United Nations and Statute of the International Court of Justice. San Francisco, 1945
- Doha Amendment to the Kyoto Protocol to the United Nations Framework Convention on Climate Change. Doha, 8 December 2012
- Kyoto Protocol to the United Nations Framework Convention on Climate Change. Kyoto, 11 December 1997
- The General Agreement on Tariffs and Trade. 1994
- Understanding on Rules and Procedures Governing the Settlement of Disputes, 15 April 1994
- United Nations Framework Convention on Climate Change. United Nations, 1992
- Vienna Convention on the Law of Treaties. Vienna, 1969

Judicial Decisions

- Reports of the Panel

    - *EEC – Regulation on Imports of Parts and Components* 22 March 1990 (L/6657 – 37S/132)
    - *Communities – Measures Affecting Asbestos and Asbestos-Containing Product.* 18 September 2000 (WT/DS135/R)
    - *Thailand – Restrictions on Importation of and Internal Taxes on Cigarettes.* 7 November 1990 (DS10/R - 37S/200)
    - *United States – Import Prohibition of Certain Shrimp and Shrimp Product.* 15 May 1998 (WT/DS58/R)
    - *United States – Import Prohibition of Certain Shrimp and Shrimp Products (Recourse to article 21.5 by Malaysia)* 15 June 2001 (WT/DS58/RW)

[175] Arranged alphabetically

    - *United States – Restrictions of Imports of Tuna*. 3 September 1991 (DS21/R – 39S/155)
    - *United States – Standards for Reformulated and Conventional Gasoline.* 29 January 1996 (WT/DS2/R)

- Reports of the Appellate Body

    - *European Communities – Measures Affecting Asbestos and Asbestos-Containing Product*. 12 March 2001 (WT/DS135/AB/R)
    - *Korea – Measures Affecting Imports of Fresh, Chilled and Frozen Beef*. 11 December 2000 (WT/DS161/AB/R, WT/DS169/AB/R)
    - *United States –Import Prohibition of Certain Shrimp and Shrimp Products.* 12 October 1998 (WT/DS58/AB/R)
    - *United States – Import Prohibition of Certain Shrimp and Shrimp Products (Recourse to article 21.5 by Malaysia)* 22 October 2001 (WT/DS58/AB/RW)
    - *United States – Standards for Reformulated and Conventional Gasoline.* 29 April 1996 (WT/DS2/AB/R)

Books

- Aust (2010) *Handbook of International Law*. Cambridge: Cambridge University Press, Second Edition
- Dutta (1999) *Strategies and games: theory and practice.* Massachusetts, The MIT Press
- Eide and Stavang (2009) *Rettsøkonomi*. Oslo: Cappelen Damm
- Nielsen and Tvarnø (2008) *Retskilder og Retsteorier*. København: Jurist- og Økonomiforbundets Forlag, 2. reviderede udgave

Articles

- Brown. 2008. The Cross-Fertilization of Principles Relating to Procedure and Remedies in the Jurisprudence of International Courts and Tribunals. *Layola of Los Angeles International and Comparative Law Review* Volume 30: pp. 219-245

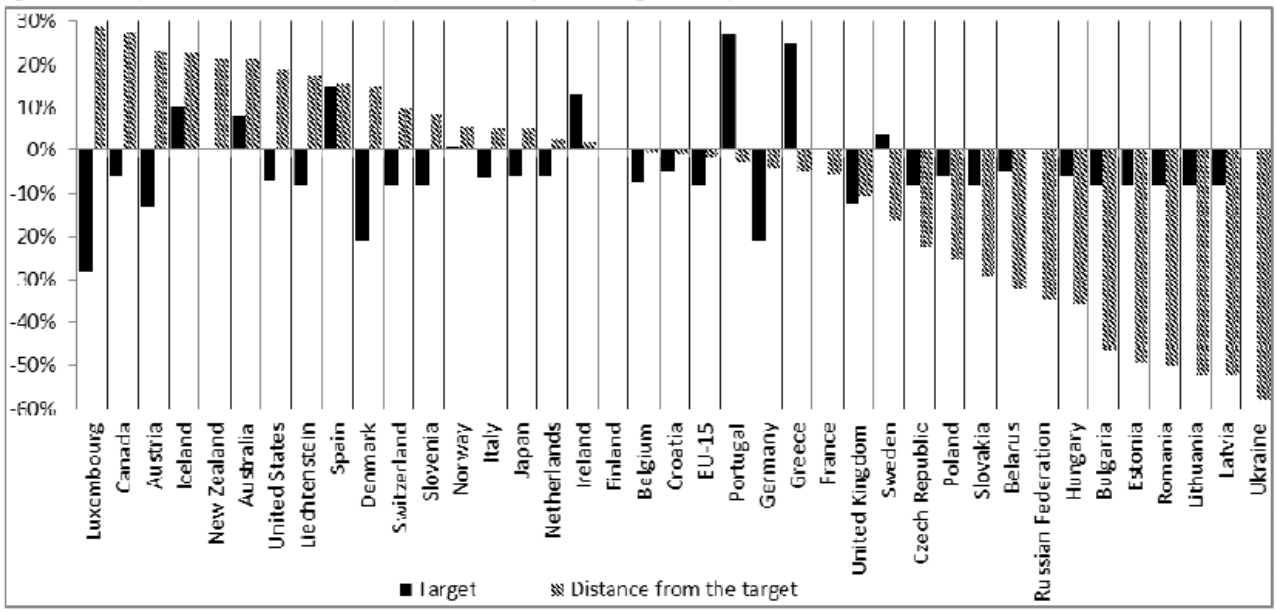
- Cameron and Gray. 2001. Principles of International Law in The WTO Dispute Settlement Body. *International and Comparative Law Quarterly* Volume 50: pp. 248-298
- Franck. 1999. Democracy, Legitimacy and the Rule of Law: Linkages. *New York University School of Law, Public Law and Legal Theory Research Paper Series* No. 2, pp. 1-20
- Franck. 2008. On Proportionality of Countermeasures in International Law. *The American Journal of International Law* Volume 102, No. 4, pp. 715-767
- Garcia. 2005. Globalization and the Theory of International Law. *Boston College Law School Legal Studies Research Paper Series* No. 75, pp. 1-12
- Hardin. 1968. The Tragedy of the Commons. *Science,* New Series Volume 162, pp. 1243-1248
- Krisch. 2009. The Case for Pluralism in Postnational Law. LSE Law, *Society and Economy Working Papers* No. 12, pp. 1-45
- Petersmann. 2007. Multilevel Judicial Governance of International Trade. *Journal of International Economic Law* Volume 10: pp. 529-551
- Posner, Figueiredo. 2004. Is the International Court of Justice Biased? *John M. Olin Law and Economics Working Paper No. 234 (2D Series)* pp. 1-43
- Stone Sweet. 2009. Constitutionalism, Legal Pluralism and International Regimes. *Indiana Journal of Global Legal Studies* Volume 16, pp. 621-645
- Waldron. 2008. The Concept and the Rule of Law. *New York University School of Law, Public Law and Legal Theory Research Paper Series No. 08-50*, pp. 1-66

Reports

- GATT/WTO Dispute Settlement Practice relating to GATT Article XX, Paragraphs (b), (d) and (g). 8 March 2002. World Trade Organization Committee on Trade and Environment
- Global Health Risks: Mortality and Burden of Disease Attributable to Selected Major Risks. 2009. World Health Organization
- The State of Compliance in the Kyoto Protocol. Reflection No. 12/2012. International Center for Climate Governance

Appendix I

Figure 1: Compliance status 2008-2010 (GHG CO2 eq. excluding LULUCF)



Source: International Center for Climate Governance

The figure shows the targets of the Kyoto Protocol during the period of 2008-2010. The solid bars represent the targets relative to the base year of 1990 (the parties to the Kyoto Protocol have agreed to reduce their levels of greenhouse gas emissions by given percentages *relative to* a fixed base year, which is 1990), and the dashed bars represent the distance from these targets. The bars, therefore, compare how the states *actually* performed relative how they *should* perform.

The dashed bars on the positive side of the scale indicate that the states have *exceeded* their respective targets. The negative dashed bars indicate that states have over-complied.