



FACULTY OF LAW
University of Lund

Tanja Turgot

Sustainable development in the
major international trade
agreements as applied to cross-
border crude oil trade

Master thesis
30 points

Supervisor
Annika Nilsson

Fields of study
International Trade Law,
International Energy Law,
International Environmental Law

Semester
Fall 2007

Contents

SUMMARY	1
SAMMANFATTNING	2
PREFACE	4
ABBREVIATIONS	5
1.1 Presentation of the subject	7
1.2 Objective	9
1.3 Method and material	10
1.4 Disposition	11
2.1 Key tendencies in the crude oil trade regime	13
2.1.2 <i>Defenition- crude oil</i>	13
2.1.3 <i>Historical background</i>	14
2.1.4 <i>The present-day oil trade market and the outlook assessment</i>	15
2.2 The main features of the principle of sustainable development	16
2.2.1 <i>General observations</i>	16
2.2.2 <i>Rio Declaration, Agenda 21 and Johannessburg Plan of Implementation</i>	17
2.2.3 <i>Oil and sustainable development</i>	19
3.1 International trade agreements in general	22
3.2 WTO agreements- multilateral agreements	23
3.2.1 <i>The General Agreement on Tariffs and Trade</i>	24
3.2.1.1 General remarks	24
3.2.1.2 Fundamental GATT provisions as applied to energy sector	25
3.2.1.3 Article XX exceptions- XX (g)	25
3.2.2 <i>Technical Barries to Trade</i>	30
3.2.2.1 General remarks	30
3.2.2.2 Environmental aspects of the TBT Agreement	31
3.3 Plurilateral sectoral agreements	34
3.3.1 <i>Energy Charter Treaty</i>	34
3.3.1.1 General remarks	34
3.3.1.2 Environmental provisions of the ECT	35
3.3.1.3 Protocol on Energy Effieciency and Related Environmental Aspects	36
3.3.1.4 Article 19	37
3.4 Regional Integration Agreements	39

3.4.1	<i>RIAs in general</i>	39
3.4.2	<i>NAFTA</i>	40
3.4.2.1	General remarks	40
3.4.2.2	Chapter 6- Energy and Basic Petrochemicals	42
3.4.2.3	NAFTA and Sustainable development	44
3.5	Summing up the fundings of the chapter	47
4.1	Comparative analysis	49
4.1.1	<i>Sufficient environmental protection?</i>	49
4.2	Summary of the results of the comparative analysis	51
5.1	Reforming the WTO/GATT	52
5.2	A more sustainable Energy Charter Treaty	53
5.3	Greening the NAFTA	55
5.4	A common approach	56
	SUPPLEMENT A – FACTS AND FIGURES	61
	BIBLIOGRAPHY	64
	TABLE OF CASES	71

Summary

Oil has been the major fossil fuel since the days of its discovering. It takes a special place in the international energy trade regime, as it is an exhaustible natural resource sensitive to political and economic changes. The instability in oil prices may lead to a considerable disruption of the global economy.

The ongoing liberalization of oil markets, the forthcoming WTO accessions of major energy exporting countries, and, most notably, the current rise of crude oil prices – are the factors that make the objective of sustainable oil trade one of the most important topics of today's agenda. Oil trade is sustainable only if it is being carried out in a form that does not threaten the environment. In particular, the traded crude oil shall fulfil certain environmental requirements posed on its physical properties and technologies used at all stages – from exploration to abandonment. For this purpose, trade policies regularly intersect with environmental concerns and encompass the concept of sustainable development - the hallmark of international environmental law.

The major international trade agreements applicable to crude oil trade are as follows: General Agreement on Tariffs and Trade, Agreement on Technical Barriers to Trade- to be found under the WTO umbrella, Energy Charter Treaty with its Protocol on Energy Efficiency and Related Environmental Aspects, North America Free Trade Agreement. They all have a significant number of Members, a high penetrating power and are of interest from a legal-technical point of view. In accordance with the number of signatories and the geographical coverage, they can be further classified into three groups- multilateral, plurilateral sectoral and regional integration agreements. All the agreements within the three groups have incorporated environmental concerns and have linked the concept of sustainable development with trade.

However, the currently existing environmental measures suffer from diverse defects that need to be cured. Notably, they lack a sufficient enforcement mechanism and a clear strategy to ensure that a trade agreement will be able to promote sustainable energy trade.

The aforementioned defects can be cured in a number of ways. The reform of the existing “sustainable” provisions of international trade agreements is necessary to link trade liberalization, environment and social cohesion in the best possible way. In this Thesis, a realistic way to achieve a more sustainable crude oil trade is suggested: to adopt such trade measures as specific carbon dioxide tax, import limitations or import bans (as the most radical measure) of unconventional crude oil (provided that such measures would satisfy other GATT requirements); to adopt a stricter technical certification procedure, special technical standards requirements and

regulations aimed at, *inter alia*, enhancing the quality of exploration, exploitation, production and disposal of crude oil.

Sammanfattning

Olja har blivit ett livsviktigt fossilbränsle efter den upptäcktes. Den tar en särställning inom den internationella energihandeln, för olja är en känslig till politiska och ekonomiska ändringar naturresurs som även kan uttömmas. Instabiliteten i oljepriser kan påverka världsekonomin.

Den pågående liberaliseringen av oljemarknader, den kommande WTO accessionen av viktiga energiexporteringsländer, samt (mest anmärkningsvärt) nuvarande stigning av råoljepriser – är de faktorer som gör målet av en hållbar oljehandel ett av de viktigaste ämnen av agendan. Oljehandel är hållbar endast om den genomförs på ett sätt som inte hotar miljön. I synnerhet, råoljan skall uppfylla vissa miljökrav ställd på dess fysiska egenskaper samt den teknik som används på alla stadier – från utforskningen till övergivandet. För att uppnå detta syfte, handelspolitiken regelbundet korsas med miljöintressen och omspanner konceptet av en hållbar utveckling – en princip som präglar Internationell Miljörätt.

De viktiga internationella handelsavtalen som är tillämpliga på råoljehandeln är som följs: ett GATT-avtal, ett TBT-avtal (finns under WTO-paraply), Energi traktat med dess Protokoll, samt NAFTA. Samtliga avtal har ett väsentligt antal av medlemmar, en stark genomträngande kraft, och är av intresse från en juridisk-teknisk synpunkt. I enlighet med ett antal av undertecknarna samt den geografiska täckningen, de kan ytterligare klassificeras i tre grupper – multilaterala, plurilaterala sektorala och regionala integrationsavtalen. Samtliga avtal inom de tre grupperna har inkorporerat miljöintressen och har länkat konceptet av en hållbar utveckling med handel.

De existerande miljöinstrument har emellertid diverse defekter som skall botas. I synnerhet, de brister en tillfredsställande genomdrivande mekanism och en tydlig strategi att tillförsäkra att ett handelsavtal skall kunna främja en hållbar energihandel.

De ovannämnda defekterna kan botas på flera sätt. En reform av de existerande ”hållbara” instrument av internationella handelsavtalen är nödvändig att länka handelsliberalisering, miljö och social sammanhållning.

Uppsatsen föreslår ett realistiskt sätt att uppnå en mer hållbar råoljehandel: att införa sådana handelsrestriktioner som koldioxidskatt, importrestriktioner och importförbud (som en radikal restriktion) av en okonventionell råolja (under förutsättning att dessa restriktioner uppfyller andra GATT krav); att införa en hårdare teknisk attesteringsförfarande, speciella krav på tekniska standarder och bestämmelser som, bland annat,

syftar till en kvalitetsförbättring av utforskning, exploatering, produktion och användning av råolja.

Preface

This thesis searches to review the major international trade agreements in the context of the debate on the oil trade and environment nexus with a particular emphasis on the principle of sustainable development. Expanded trading opportunities in natural resources coupled with dramatic rise of oil prices put the oil markets under the spotlight. At this point, the question arises whether the major international trade agreements provide rational environmental policy instruments for the players on the global oil trade scene.

To scrutinize the major international trade agreements and to draw a *de lege ferenda* perspective requires a great deal of work. Throughout the process of producing this Thesis, I have acquired a professional guidance from my supervisor **ANNIKA NILSSON**, whom I would like to thank for help.

I would also like to thank **ANITA RØNNE**, associate professor at the Law Faculty of the Copenhagen University, for having organized a wonderful study trip to one of the world largest oil companies – “Norsk Hydro”.¹ The study trip was undertaken in March 2007 within the course of International Energy Law; and it brought into play the idea of writing a Thesis dealing with the issue of sustainable oil trading.

¹ On 1 October 2007 “StatoilHydro” was established following the merger between Statoil and Hydro’s oil and gas activities.
(<http://www.statoilhydro.com/en/AboutStatoilHydro/StatoilHydroInBrief/Pages/default.aspx>, latest visited 23-12-2007).

Abbreviations

AB	the Appellate Body
APEC	Asia Pacific Economic Cooperation
ASEAN	Association of Southern Asian Nations
CACM	Central American Common Market
CBD	the Convention on Biological Diversity
ECOWAS	Economic Community of West African States
ECT	Energy Charter Treaty
EU	European Union
GATT	the General Agreement on Tariffs and Trade
ICJ	International Court of Justice
MFN	Most-favoured nation treatment
IEA	International Energy Agency
NAAEC	North American Agreement on Environmental Cooperation
NAFTA	the North American Free Trade Agreement
NT	National Treatment
OECD	Organisation for Economic Development and Cooperation
OPEC	Organization of the Petroleum Exporting Countries
RIAs	Regional Integration Agreements
QRs	Quantitative restrictions
RIAs	Regional Integration Agreements
SACU	Southern African Customs Union

TBT	the Agreement on Technical Barriers to Trade
UN	United Nations
UNCED	United Nations Conference on Environment and development
UNFCCC	United Nations Framework Convention on Climate Change
WTO	the World Trade Organization

1 Introduction

1.1 Presentation of the subject

In 2007, oil prices rose drastically following the tensions on the global political arena, which immediately put crude oil markets under the spotlight. In this respect, a wide range of issues - including energy efficiency and sustainability - became a matter of preoccupation for a number of legislators and policy-makers.

To underline the uniqueness of oil, it has been treated in a rather uncommon way in this Thesis. As the front page suggests, the subject of the discussion has intentionally been *crude* oil – oil in its most classical meaning - as opposed to oil derivatives or services.

Furthermore, it has been treated separately from gas, which is also derogation from the classic approach of treating gas and oil jointly in the legal contest. The motive behind such derogation was to resist a common uniformed approach that is not capable to reflect the whole set of peculiarities of the problems related to a single natural resource.

According to the IEA's "World Energy Outlook 2007"² and the OPEC's "World Oil Outlook 2007"³, oil maintains its leading position in meeting the world's growing energy needs for the foreseeable future. ARAMCO- the world's largest oil corporation in terms of proven crude oil reserves and production- reveals in its Annual Report 2006 that the issue of oil supply will even become more critical in the coming years.⁴

The finiteness of the resource exacerbated by the high concentration of reserves in about a dozen countries, the high uncertainty linked to resource development and the high specificity of investment – all are examples of distinguishing characteristics that grant oil a special place among other natural resources.⁵ Also due to its unique properties (oil has the highest energy density of all fossil fuels, about 40-45 GJ/t or 35-40 GJ/m³, with some variation due to gravity and sulphur content)⁶, oil has become the

² Executive summary of *World Energy Outlook 2007* is available at <http://www.iea.org/Textbase/npsum/WE02007SUM.pdf> (latest visited 11-11-2007)

³ *World Oil Outlook 2007* is available at <http://www.opec.org/library/World%20Oil%20Outlook/pdf/WorldOilOutlook.pdf> (latest visited 11-11-2007)

⁴ ARAMCO, *Annual Report 2006*, available at http://www.saudiaramco.com/irj/go/km/docs/SaudiAramcoPublic/AnnualReview/2006/AnnualReview_2006.pdf (latest visited 12-11-2007)

⁵ Energy Charter Secretariat "Putting a price on Energy. *International Pricing Mechanisms for Oil and Gas*", p. 42, available at http://www.encharter.org/fileadmin/user_upload/document/Oil_and_Gas_Pricing_2007_ENG.pdf (latest visited 30-11-2007)

⁶ *Ibid.* p. 35

most important energy source, accounting for more than a third of the world primary energy mix.⁷

The crude oil market place is dynamic and fast-moving.⁸ For the period of 4 months (as it took me to produce this Thesis), the crude prices have gone up and down. Along with another escalation of political tension in the Middle East, the front-month crude contract climbed above \$84/bbl⁹ in intraday trading October 12 on the New York market.¹⁰ During the trading week of October 29-November 2, crude prices swung further fluctuating at record levels of \$93-95/bbl¹¹ that had many analysts anticipating \$100/bbl¹² oil within weeks.¹³ November 7, they slipped back from the previous day's closing, but not before hitting an all-time high of \$98.62/bbl¹⁴ in overnight electronic trading.¹⁵

Apart from dramatic price swings¹⁶, oil traders also face the cascading confrontation over the environmental effects of liberalization of oil markets.

The primary objective of trade liberalization is to remove boundary restrictions and to change trade policy, which is *per se* good for promotion of environmental protection due to a number of reasons that fall out from the discussion in this Thesis. However, oil trade liberalization invokes a wide range of concerns. To start with, fuel products generate emissions that may have a negative impact on human health and environment. Increase in trade volumes of crude oil leads to increase trade volumes and use of fuel products.

Further, the free cross-border oil trade creates greater potential and possibilities of trading in oil that possesses impaired properties, as the increased competition- with the focus on advantageous prices- may have an adverse effect on the quality of production and product control.

What is more, increase in trade volumes of crude oil leads to its increased production volumes and a rapid exhaustion of world crude oil resources.

⁷ *Ibid.* p. 67

⁸ <http://www.shell.com/home/content/trading-en/aboutshell/crudeoiltradingandsupply/cot.html> (latest visited 12-11-2007)

⁹ 1 Oil Barrel = 42 US gallons, 158.9873 litres ([http://en.wikipedia.org/wiki/Barrel_\(unit\)](http://en.wikipedia.org/wiki/Barrel_(unit))), latest visited 23-12-2007)

¹⁰ *Oil and Gas Journal*, October 15, 2007, the information is available at <http://www.ogj.com/search/results.cfm?si=OGJ&searcharea=7&keywords=sustainable%2C+crude+oil&x=0&y=0> (latest visited 12-11-2007)

¹¹ See footnote 8.

¹² See footnote 8.

¹³ *Oil and Gas Journal*, the information is available at <http://www.ogj.com/currentissue/index.cfm?p=7> (latest visited 12-11-2007)

¹⁴ See footnote 8.

¹⁵ *Oil and Gas Journal*, the article by Fletcher, Sam “Market Watch: Crude pulls back from \$98/high”, available at [http://www.ogj.com/display_article/311516/7/ONART/none/GenIn/1/MARKET-WATCH:-Crude-pulls-back-from-\\$98/high/](http://www.ogj.com/display_article/311516/7/ONART/none/GenIn/1/MARKET-WATCH:-Crude-pulls-back-from-$98/high/) (latest visited 12-11-2007)

¹⁶ For further information about the development of crude oil prices, see Supplement A.

Minimizing this negative impact of oil trade liberalization constitutes a continuous challenge for the world community. When oil companies and traders are challenged on the issue of sustainability, the focus is usually made on the environmental properties of their products. For instance, trade restrictions (*inter alia*, special taxes, bans, import limitations) may be introduced to favor export of light crude oil (heavy crudes have a more severe environmental impact, as they carry contaminants such as sulfur, vanadium and nickel; they also contain more carbon in relation to hydrogen¹⁷).

Sustainable oil trade does not simply cover trade restrictions on crude oil that possesses unsustainable physical properties. It also includes, *inter alia*, the following issues: Have the clean and efficient technologies been used at the production stage? Has the traded oil been disposed in a way that has a minimum effect on environment? Has the oil exporting company taken due regard to environment at the construction and the abandonment stages? Has the oil exporter taken responsibility for its own and others safety and security at all stages? Finally, is there a possibility for general import restrictions on volumes of crude oil?

This triggers a complex debate on the oil trade and environment nexus: on the one hand, policy-makers attempt to find equilibrium between the opposed interests - that of rapidly increasing energy use and environmental protection; on the other hand, economists maintain the presumption that trade instruments in general should not be used for environmental policies.¹⁸

Because of the complicity and importance of the issue, the effectiveness of the existing environmental policy instruments in the recent international trade agreements needs to be revised. Is International Law well-equipped to deal with such a complex issue as the intersection of cross-border oil trade and sustainable development?

1.2 Objective

The overall purpose of this thesis is to discuss how the environmental principle of sustainable development is emerged in international legal instruments that shape the parameters of sustainable cross-border oil trade.

¹⁷ Wikipedia, free encyclopedia online

http://en.wikipedia.org/wiki/Heavy_crude_oil#Environmental_impact (latest visited 23-12-2007).

¹⁸Beghin, Jonh/Roland-Holst, David/van der Mensbrughe, Dominique "A Survey of the Trade and Environment Nexus: Global Dimensions", OECD Economic Studies No. 23, Winter 1994, available at

<http://www.oecd.org/dataoecd/1/43/39030956.pdf> (latest visited 15-09-2007)

The Thesis is also aimed at drawing a *de lege ferenda* perspective for the sake of a more sustainable future.

The following questions will form the basis for the discussion:

1. What are the major international legal instruments that have significant implications for international oil trade?
2. What are the environmental problems that are regularly associated with oil trade? How is the principle of sustainable development safeguarded in the international legal acts related to cross-border oil trade?
3. What restrictions should be introduced into the existing legal instruments to enhance the promotion of sustainable development in relation to crude oil trade? How would the possible restrictions apply?

The first question intends to survey the major legal instruments related to cross-border oil trade, while the second question aims at investigation of if and how the principle of sustainable development is safeguarded in the international trade agreements. The second question is also aimed at discovering of the problems related to the impact of international oil trade on sustainability. The third question addresses an outlook for the environmental provisions in the major international trade regimes, particularly regarding oil trade.

1.3 Method and material

In order to fulfill the purpose of this Thesis, I will use a traditional legal dogmatic approach together with comparative and analytical methods in chapters 4 and 5. When determining, what international legal acts are of the greatest interest for the cross-border oil trade, the following legal instruments will be considered:

- The legal instruments that cover the greatest number of States;
- The legal instruments that contain specific provisions on sustainability and are therefore of interest from the legal-technical point of view;
- The legal instruments that have a practical significance.

Thus, the Thesis addresses the most prominent international legal instruments as applied to cross-border oil trade: the General Agreement on Tariffs and Trade (the GATT) together with the Agreement on Technical Barriers to Trade (the TBT) - the two agreements under the umbrella of WTO- the Energy Charter Treaty (the ECT) with it's Protocol on Energy Efficiency and Related Environmental Aspects, and the North American Free Trade Agreement (NAFTA). For the purpose of this Thesis, the

provisions dealing with the principle of sustainable development in cross-border oil trade will be scrutinized.

The relevant provisions will not only be subject to a thorough comparative analysis, but also will be examined from *de lege lata* and *de lege ferenda* perspectives. Herewith, the author of this paper will suggest a number of alternative solutions as to the enhancement of the existing legal instruments for the purpose of creating a more sustainable oil trade in the future.

Moreover, the Thesis has a number of remarkable features:

- the subject matter chosen for the discussion is highly up-to-date in the light of a growing tension around the intersection of expanding energy trade and environmental concerns;
- in order to emphasize the multilateral character of the subject matter and, thus, lay emphasis on its importance, the author has chosen to link three dimensions- *legal, economic and political*;
- an attempt will be made to link the opposed needs- that of growing demand on crude oil and that of environmental considerations.

A great variety of materials has been used to form this paper. As a starting point, when approaching the subject, primary sources of international law have been referred to, that is to say the legal texts of international agreements aimed at trade liberalization and applicable to oil trade. The literature available at the Faculty of Law, the University of Lund has been used, as well as books from the Environmental Institution and the Geo Library have been helpful. However, most of the material, *inter alia*, reports and statements of different actors have for the most part been available through internet sources. Various official homepages and numerous articles from recognized printed sources published on the internet have been referred to. Such a variety of materials that has been used to produce this Thesis has hopefully helped to create a broader view of the issue.

1.4 Disposition

The first chapter contains a brief presentation of the subject matter, a statement of the overall purpose of the thesis and its disposition. It is aimed to introduce the reader into the subject matter.

The second chapter is predominantly descriptive and gives a general historic background of the development of the crude oil trade and a brief outlook assessment, as well as it focuses on an intersection of international trade principles and the concept of sustainable development.

The third chapter gives a general overview of the major legal instruments related to the international oil trade, including multilateral agreements, plurilateral and regional free trade agreements. The focus will be made on

the most prominent regimes, the ones that are of interest from both, the legal- technical and practical points of view.

The fourth chapter is oriented around the discussion on the lacks of the existing environmental policy instruments integrated in the major international trade agreements. It stresses the complicity and the importance of the issue and opens up new avenues for discussion.

The fifth chapter contains *de lege ferenda* perspective, whereby it suggests the possible improvements of the existing legal instruments in order to safeguard the principle of sustainable development in the future.

2 The intersection of crude oil trade and the principle of sustainable development

2.1 Key tendencies in the crude oil trade regime

2.1.2 Defenition- crude oil

In this Thesis, oil has intentionally been treated in its most conventional sense- as *crude oil*, a global commodity that has been traded internationally. In making such a distinction, I have distinguished crude oil from its derivatives- final products- or services (crude oil itself has almost no direct end use, and needs to be refined into petroleum products to be consumed¹⁹). The underlying reason for the distinction has been to avoid confusion, as some international trade agreements (e.g. WTO, NAFTA) suggest different sets of rules applicable to trade with goods, services and commodities. Notably, commodity is a more general definition and may also include goods.²⁰

Petroleum (Latin Petroleum derived from Greek πέτρα (Latin petra) - rock + έλαιον (Latin oleum) - oil) or **crude oil** is a naturally occurring liquid found in formations in the Earth consisting of a complex mixture of hydrocarbones (mostly alkanes) of various lengths. The approximate length range is C₅H₁₂ to C₁₈H₃₈.²¹ Because crude oil is a mixture of widely varying constitutes and proportions, its physical properties also vary widely.²²

Petroleum is used mostly, by volume, for producing fuel oil and gasoline (petrol), both important "primary energy" sources. 84% (37 of 42 gallons in a typical barrel) of the hydrocarbons present in petroleum is converted into

¹⁹ Energy Charter Secretariat "*Putting a price on Energy. International Pricing Mechanisms for Oil and Gas*", p. 68, available at http://www.encharter.org/fileadmin/user_upload/document/Oil_and_Gas_Pricing_2007_ENG.pdf (latest visited 30-11-2007)

²⁰ A **commodity** is anything for which there is demand, but which is supplied without quantitative differentiation across a given market. Characteristic of commodities is that their prices are determined as a function of their market as a whole. Generally, these are basic resources and agricultural products. (Wikipedia, free Encyclopedia online <http://en.wikipedia.org/wiki/Commodity>, latest visited 30-11-2007)

²¹ Wikipedia, free Encyclopedia online <http://en.wikipedia.org/wiki/Petroleum> (latest visited 15-09-2007)

N.B.: With all awareness that Wikipedia is not any recognized source, I have chosen to refer to it anyway, as it provides for a more understandable and precise definition of petroleum than Britannica Online Encyclopedia.

²² Britannica Online Encyclopedia <http://search.eb.com/eb/article-9028047> (latest visited 15-09-2007)

energy-rich fuels (petroleum-based fuels), including gasoline, diesel, jet, heating, and other fuel oils and liquefied petroleum gas.

Due to its high energy density, easy transportability and relative abundance, it has become the world's most important source of energy since the mid-1950s.²³

2.1.3 Historical background

Oil industry began with the first oil drilling in Titusville, Pennsylvania, in the US in 1859. At that time oil prices went up and down every time a new field was discovered. In 1870, John D. Rockefeller established the *Standard Oil Company* in Cleveland, Ohio, which was later broken up into *Exxon*, *Mobil*, and *Chevron* - three of the Seven Sisters. *Royal Dutch* started producing oil in Indonesia in the 1890s, and *Shell Transport and Trading* distributed and sold kerosene in a vast area. *Shell* and *Royal Dutch* merged in 1907 and became the *Royal Dutch / Shell Group*. The *Nobels* and the *Rothschilds* started their ventures in Baku, Azerbaijan, under the Russian Empire.²⁴

As oil prices plunged in the 1920s after World War I, Standard Oil of New Jersey (*Exxon*), *Royal Dutch Shell* and Anglo-Persian (*BP*) formed a cartel in 1928. *Chevron*, *Gulf*, *Mobil* and *Texaco* joined them later. The cartel became known as *the Seven Sisters*, and it managed to stabilize world oil prices and supply. Venezuela, Iran, Iraq, Kuwait and Saudi Arabia formed OPEC (Organisation of Petroleum Exporting Countries) in 1960 with the purpose to increase oil prices, as the major plunge in oil prices took place in the early 1950s. In 1973 OPEC raised prices unilaterally from 3 to 12 \$/bbl.²⁵

Since the end of the Second World War, the energy use has remarkably increased worldwide, which has led to increased international energy trade and reliance on energy imports, particularly petroleum.²⁶

Over the 30-year period from 1971 to 2001, the world oil production increased by 44 %. However, the growth in oil production was not constant for the reason that oil prices surged twice during the above-mentioned period. The first spike came year 1973, when the OPEC oil embargo

²³ Wikipedia, free Encyclopedia online
<http://en.wikipedia.org/wiki/Petroleum> (latest visited 15-09-2007)

²⁴ Energy Charter Secretariat "Putting a price on Energy. *International Pricing Mechanisms for Oil and Gas*", pp. 75-77, available at
http://www.encharter.org/fileadmin/user_upload/document/Oil_and_Gas_Pricing_2007_ENG.pdf (latest visited 30-11-2007)

²⁵ *Ibid.* p.76

²⁶ Lyster, Rosemary/Bradbrook, Adrian "Energy Law and the Environment", Cambridge University Press, 2006, p.35

resulted into massive rise in crude oil prices (Arabian Light prices surged from \$ 1.84/bbl to \$ 10.77/bbl in 1974). The second dramatic rise in prices came in 1981 during the period of the Iranian revolution and the Iran- Iraq conflict (the prices rose to \$ 40/bbl). As opposed, world energy demand continued to increase together with industrialisation and growing economy.
27

2.1.4 The present-day oil trade market and the outlook assessment

In 2002, the world oil production increased further and reached about 77 million barrels per day. Thus, oil remains the dominant fuel, and global oil demand is likely to reach 99 million barrels per day in 2015.

A significant regional shift is likely to take place between now and 2030 in world oil demand. Over 70 % of the increase in demand comes from the developing countries, with China alone accounting for 30 %. Such a shift of the centre of gravity of global energy demand occurs due to the rapid population growth of the developing countries. The increase in energy demand will lead to oil import dependency in all major oil consuming regions.

The high level of reliance of the world on energy for economic growth, coupled with the growing interdependence of regions and nations, means that energy trade continues to be a vital element of international relations.

Oil occupies a curious place in global energy trade scene. Firstly, oil is an exhaustible natural resource. Secondly, oil prices still have a massive impact on the economic health of the global economy, and most OECD countries have already experienced a worsening of their account balances because of the higher interest rates. Such factors as new geopolitical tensions or supply disruption may drive the oil prices higher. The more the oil prices rise, the greater the threat to economic growth in importing countries.²⁸ Lastly, oil resources are distributed highly disproportionately throughout the world. Middle East is the world's largest producing region, and OPEC²⁹, with close to 80% of world crude oil reserves³⁰, is the world's leading oil exporting

²⁷ "30 Key Energy Trends in the IEA and Worldwide", IEA, 2005, available at http://www.iea.org/textbase/nppdf/free/2005/energy_trends.pdf (latest visited 12-10-2007)

²⁸ "World Energy Outlook 2006", available at <http://www.worldenergyoutlook.org/summaries2006/English.pdf> (latest visited 11-10-2007)

²⁹ The Organization comprises 12 Members: Algeria, Angola, Indonesia, Islamic Republic of Iran, Iraq, Kuwait, Socialist People's Libyan Arab Jamahiriya, Nigeria, Qatar, Saudi Arabia, United Arab Emirates and Venezuela. Their objective is to co-ordinate and unify petroleum policies among Member Countries.

³⁰ "World Oil Outlook 2007", OPEC, available at <http://www.opec.org/library/World%20Oil%20Outlook/pdf/WorldOilOutlook.pdf> (latest visited 14-11-2007)

intergovernmental organization. That makes oil an important political tool, as well.

2.2 The main features of the principle of sustainable development

2.2.1 General observations

An efficient oil trade remains essential for global economy, and the creation of a sustainable global oil market is the major preoccupation of a great number of legislators and policy-makers. The international instruments that are aimed at creating the parameters of a sustainable global trading system have a significant implication for cross-border oil trade. In order to achieve the objective of a sustainable trading system, the intersection of free trade rules and regimes and environmental regulation should not be underestimated. Indeed, trade liberalization and environmental protection share at least one common aim: enhancing social welfare and improving the quality of life, although often through different means.

The ICJ has confirmed such general obligations as the “obligation of States to respect and protect the natural environment”³¹ and obligation “to ensure that activities within their jurisdiction or control respect the environment of other States or of areas beyond national control is now part of the corpus of international law relating to the environment”. “The Court also recognizes that the environment is not an abstraction but represents the living space, the quality of life and the very health of human beings, including generations unborn”.³² A number of general principles of international environmental law have emerged and are reflected in treaties, binding acts of international organizations, soft law commitments and state practice. The major principle of environmental law is that of sustainable development.

The concept of sustainable development has its origin in the report of the World Commission on Environment and Development, *Our Common Future*, 1987 (the Brundlandt report) that included environmental strategies for achieving sustainable development by the year 2000 and beyond. The Brundlandt report defined sustainable development as “development which meets the needs of present generations without compromising the ability of future generations to meet their needs”. What it means in practice, is hard to determine, however, it refers to at least four separate but related objectives:

- 1) A commitment to preserve natural resources for the benefit of present and future generations;

³¹ Order of 22 September 1995, ICJ Reports 1995, 306, para. 64

³² 8 July 1996, Advisory Opinion, ICJ Reports 1996, 226 at 241 at <http://www.icj-cij.org/docket/files/95/7495.pdf> (latest visited 09-09-2007)

- 2) Appropriate standards for the exploitation of natural resources based upon harvest or use ;
- 3) An obligation of the states to take account of the needs of other states and people;
- 4) An integration of environmental considerations into economic and other development plans, programs, projects. The development needs are taken into account, when applying environmental objectives.³³

Since 1987, numerous legal instruments revealing the concept of sustainable development have been adopted. Five international documents reflecting the basis for global initiatives to achieve sustainable development were developed at the 1992 UNCED Conference held in Rio de Janeiro: the Rio Declaration, Agenda 21, UNFCCC, CBD, and the Statement of Principles for the Sustainable Management of Forests.

2.2.2 Rio Declaration, Agenda 21 and Johannesburg Plan of Implementation

The Rio Declaration, Agenda 21 and the Johannesburg Plan of Implementation are the documents that provide the background for the understanding of sustainable development.

Principle 1 of the Rio Declaration proclaims human beings to be at the centre of concerns for sustainable development. They are entitled to a healthy and productive life in harmony with nature.³⁴

Sustainable development, as enacted in Rio Declaration, includes both substantive and procedural elements. The substantive elements comprise the right to development (principle 3), the integration of environmental protection and economic development (principle 4), sustainable utilization of natural resources (employed in a number of Rio- agreements), the intra- and inter- generational equity, the internalization of environmental costs through application of the “polluter pays principle”. The procedural elements include public participation in decision making and environmental impact assessment.³⁵

Agenda 21 is a broad plan of action across all areas of human activity. Its preamble underlines the growing attention to environment and development,

³³ Revesz, Richard L./Sands, Philippe and Stewart, Richard B. “*Environmental Law, the Economy, and Sustainable Development*”, Cambridge University Press, 2000, pp. 372-375

³⁴ *Rio Declaration on Environment and Development –International Environmental Law Policy Series-* Johnson, Stanley P. “*The Earth Summit- the United Nations Conference on Environment and Development (UNCED)*”, Graham Trotman/Martinus Nijhoff, pp. 117-122, the text of Rio Declaration is also available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm>

³⁵ Birne, Patricia/Boyle, Alan “*International Law and the Environment*”, second edition, , p. 86

and emphasizes the need for global cooperation in achieving the objectives of sustainable development:

*“...integration of environment and development concerns and greater attention to them will lead to the fulfilment of basic needs, improved living standards for all, better protected and managed ecosystems and a safer, more prosperous future. No nation can achieve this on its own; but together we can - in a global partnership for sustainable development.”*³⁶

Agenda 21 is an essential document not only because it addresses the present problems, but also because it aims at preparing the world for the potential challenges. Thus, Agenda 21 should to be taken globally, nationally and locally by organizations of the United Nations System, Governments, and Major Groups in every area in which human impacts on the environment.³⁷

The Johannesburg Plan of Implementation is intended to further promote the integration of the three interdependent components of sustainable development- economic, social and environmental development. It relies on the earlier achievements and, in addition, sets out new commitments and priorities for action on sustainable development in such areas as poverty eradication, health, trade, education, science and technology, regional concerns, natural resources, and the institutional arrangements.³⁸ Furthermore, it recognizes the central role of globalization for sustainable development:

*“We recognize that globalization and interdependence are offering new opportunities for trade, investment and capital flows and advances in technology... for the growth of the world economy, development and the improvement of living standards around the world.”*³⁹

Clause 19 of the Plan of Implementation⁴⁰ deals specifically with energy, calling upon governments, regional and international organizations to

³⁶ <http://www.un.org/esa/sustdev/documents/agenda21/english/agenda21chapter1.htm>
(latest visited 17-09-2007)

³⁷ <http://www.un.org/esa/sustdev/documents/agenda21/index.htm> (latest visited 17-09-2007)

³⁸ http://www.thecommonwealth.org/Internal/145632/understanding_the_johannesburg_plan_of_implementation/ (latest visited 17-09-2007)

³⁹ http://www.un.org/esa/sustdev/documents/WSSD_POI_PD/English/POIChapter5.htm
(latest visited 17-09-2007)

⁴⁰ http://www.johannesburgsummit.org/html/document/summit_docs/plan_final1009.doc
(latest visited 17-09-2007)

implement the recommendations of the CSD-9⁴¹ concerning energy for sustainable development.⁴²

2.2.3 Oil and sustainable development

Kofi Anan honoured with Zayed prize for environment, the United Arab Emirates, Dubai, 6 February 2006:

“...To stand here in the UAE, and especially in Dubai, is to stand on the soil of one of the world’s great economic miracles.

It is a country whose leaders and people have learned the importance of using scarce resources efficiently.

It is a land that knows the importance of human and intellectual capital. Here in the heart of the world’s oil region, Dubai itself derives less than 10% of its income from oil.

And it is a civilization grounded in strong cultural and spiritual values, which recognizes that sustainable development will not succeed without caring for and conserving the world’s natural capital.

That understanding lies at the heart of the United Nations’ global mission of peace and development.

Yet all too often, the environment has been viewed as a domain of limitless bounty -- a realm over which humans could exercise heedless dominion. And protecting the environment has been considered an afterthought, or even a luxury.

Again and again, from antiquity to the modern era, humankind has been shown the folly of such assumptions.

Today, we understand that respect for the environment is one of the main pillars of our fight against poverty, and essential for achieving the Millennium Development Goals.

But still, despite some real improvements in some parts of the world, our efforts to safeguard the global environment and make a transition to sustainable development lag behind what is truly needed...⁴³

⁴¹ The ninth session of the United Nations Commission on Sustainable Development met at UN Headquarters in New York on 5 May 2000 and from 16 to 27 April 2001 and gave special attention to, inter alia, Energy for Sustainable Development and preparations for the World Summit on Sustainable Development.

⁴² Lyster, Rosemary/Bradbrook, Adrian *“Energy Law and the Environment”*, Cambridge University Press, 2006, p. 71

Indeed, the efficient use of natural resources is tightly bound to the concept of sustainable development. Although the issue was revealed in the Rio Declaration, Agenda 21 and the Johannesburg Plan of Implementation, it only gained attention recently in conjunction with growing awareness of environmental concerns.

Oil trade is facing difficult challenges, primarily when the actors in the international oil trade scene are attempting to balance growing energy demands and environmental protection. In this context, the following key questions arise:

- What are the environmental problems that are commonly associated with oil trade?
- How can the notion of “sustainable oil trade” be defined?
- Is oil trade sustainable today?
- What restrictions are necessary to make it more sustainable in the future?

Nowadays, liberalization of energy markets is at hand. Although it has a number of positive features, its effects on environment are highly debatable. To start with, fuel products generate emissions that may have a negative impact on human health and environment. Burning oil releases carbon dioxide into the atmosphere, which contributes to global warming. Increase in trade volumes of crude oil leads to increase trade volumes and use of fuel products.

Further, the free cross-border oil trade creates greater potential and possibilities of trading in oil that possesses impaired properties, as the increased competition- with the focus on advantageous prices- may have an adverse effect on the quality of production and product control.

Oil spills at sea and on land during transportation damage natural ecosystems, and they are difficult to control.

What is more, increase in trade volumes of crude oil leads to its increased production volumes and a rapid exhaustion of world crude oil resources.

Minimizing this negative impact of oil trade liberalization constitutes a continuous challenge for the world community. When oil companies and traders are challenged on the issue of sustainability, the focus is usually made on the environmental properties of their products. For instance, trade restrictions (*inter alia*, special taxes, bans, import limitations) may be introduced to favor export of light crude oil.

Today, proven reserves of conventional crude oil are almost depleted, and there is a growing interest in developing the vast resources of unconventional oils. However, unconventional crudes (heavy crude oils) are extremely viscous and contain high concentrations of sulfur and several metals, above all nickel and vanadium. These are the properties that make them difficult to pump out of the ground or through a pipeline and interfere with refining. These physical properties also present serious environmental challenges to the growth of heavy oil production and use: chemical wastes and byproducts of heavy crude oil production, upgrading, and refining may cause serious ecological injury if released to the environment; spills of heavy crude oils and syncrudes are difficult to clean up and may cause long-term injury to the affected environment.⁴⁴

Sustainable oil trade does not simply cover trade restrictions on crude oil that possesses unsustainable physical properties. It also includes, *inter alia*, the following issues: Have the clean and efficient technologies been used at the production stage? Has the traded oil been disposed in a way that has a minimum effect on environment? Has the oil exporting company taken due regard to environment at the construction and the abandonment stages? Has the oil exporter taken responsibility for its own and others safety and security at all stages? Finally, is there a possibility for general import restrictions on volumes of crude oil?

In the next, I will illustrate the legal instruments that shape parameters for sustainable cross-border crude oil trade today. As the concept of “sustainable oil trade” covers a broad range of issues, I will focus on the following key concerns:

- Measures aimed to maintain conservation of exhaustible natural resources (crude oil);
- Trade measures necessary to ensure quality of exported crude oil;
- Trade measures promoting efficient use of fuels;
- Measures aimed to enhance social and economic conditions.

I choose deliberately not to discuss the problems of oil spills and emissions of carbon dioxide, as they deserve a separate treatment.

The next chapter illustrates the most significant international trade agreements relevant to energy sector and provides an overview of the environmental instruments incorporated in their provisions.

⁴⁴ Information is available at the homepage of **Battelle**, an international science and technology enterprise, available at <http://www.battelle.org/Environment/publications/envupdates/Fall2003/article9.stm> (latest visited 24-12--2007)

3 The major international trade agreements- de lege lata perspective

3.1 International trade agreements in general

Through the times, certain countries endeavored to create a favorable trading climate by means of relaxing of trade barriers through diverse agreements such as treaties of friendship or commercial agreements. **The General Agreement on Tariffs and Trade** (in force 1948) has become the central multilateral legal framework that aims at reducing or eliminating trade barriers in order to provide a sustainable international trading environment. Accordingly, it has become the legal framework under which almost all trade among nations occurs.⁴⁵

Although the GATT does not include specific provisions on trade in energy, its generally applicable trade rules apply to oil trade. The following WTO provisions refer also to environmental concerns: the preamble to WTO agreement, the accompanying Decision on Trade and Environment of 14 April 1994, general exceptions of GATT Article XX (g), the Technical Barriers to Trade Agreement.

In the light of foregoing, it is coherent to place the GATT and its TBT agreement within the scope of the discussion in this Thesis.

Co-existing with the GATT, are plurilateral, regional and bilateral trade agreements, all formed to provide a sustainable trading environment through trade liberalization. In this regard, the discussion will be focused around the most remarkable plurilateral sectoral agreement- **Energy Charter Treaty**- that was signed by most of the countries of western and central Europe and the former Soviet Union, and particularly aimed at energy trade liberalizing.

Of a wide range of regional trade agreements that have at hand in shaping patterns of international trade, **NAFTA** is of greatest interest for the discussion in this Thesis due to a number of reasons. Firstly, it contains an energy chapter (chapter six), which applies to measures relating to energy and basic petrochemicals and covers measures relating to investment and to the cross-border trade in services associated with such goods.⁴⁶ Secondly, NAFTA

⁴⁵ *The Greening of World Trade*, A Report to EPA from The Trade and Environment Committee of the National Advisory Council for Environmental Policy and Technology, the U.S. Government Printing Office, 1993, p. 45

⁴⁶ <http://www.sice.oas.org/Trade/NAFTA/chap-06.asp#Chap.VI> (latest visited 12-11-2007)

has been the subject of intense analysis by environmentalists.⁴⁷ Moreover, NAFTA not only does illustrate the intensity of the debate on trade and environment, but also refers to the principle of sustainable development.

Few bilateral agreements (through various geographic regions) contain rules specific to energy sector and, thus, fall out of the scope for discussion at this point.

3.2 WTO agreements- multilateral agreements

The multilateral trading system has a long history of political attempts to control the changing conditions in international trade. The modern multilateral trading system is the result of the 1986-94 Uruguay Round negotiations and contains around 60 agreements and decisions.⁴⁸

The WTO agreement, consisting of about 23, 000 pages grew out of the multilateral GATT system and came into being on 1 January 1995.⁴⁹ In addition to the fact that the WTO system encompasses such a considerable number of multilateral agreements, it gives legal primacy to the WTO agreement in case of conflict, and includes a dispute settlement system, binding to all members.⁵⁰ Furthermore, the preamble to the WTO agreement for the first time in the history of the multilateral trading system referred to sustainable development⁵¹:

“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...”⁵².

⁴⁷ *The Greening of World Trade*, A Report to EPA from The Trade and Environment Committee of the National Advisory Council for Environmental Policy and Technology, the U.S. Government Printing Office, 1993, p. 58

⁴⁸ http://www.wto.org/english/docs_e/legal_e/legal_e.htm

⁴⁹ Egelund Olsen, Birgitte/Steinicke, Michael/ Engsig Soerensen, Karsten ”WTO Law- from a European perspective”, Forlaget Thomson, pp.28-29

⁵⁰ *Ibid.* pp.20-21

⁵¹ Bugge,Thorbjoern Daniel ”WTO Adjudication- an institutional analysis of adjudicative balancing of competing interests- exemplified with developments in interpretation of GATT Article II and XX”, Forlaget Thomson, p. 58

⁵² http://www.wto.org/english/tratop_e/envir_e/issu4_e.htm#wtoagmpreamble (latest visited 18-10-2007)

The reference to environmental concerns reflects the growing attention to the link between trade and environment. Furthermore, the essential elements of the relationship between the multilateral trading system and environmental policy were laid down in the “Decision on Trade and Environment”, accompanying the WTO agreement.⁵³

Firstly, the “Decision on Trade and Environment” recalled the preamble of the WTO agreement. Secondly, it declared that “...there should not be, nor need be, any policy contradiction between upholding and safeguarding an open, non-discriminatory and equitable multilateral trading system on the one hand, and acting for the protection of the environment, and the promotion of sustainable development on the other...”⁵⁴ Finally, it underlined the need to coordinate the policies in the field of trade and environment, and noted the limitations imposed by and on the multilateral trading system in this regard.⁵⁵ It should be noted that the WTO agreement allows its Members a large measure of autonomy to determine their own policies on the environment in relationship with trade.

The WTO system has played an important role for the development of international trading regime. Due to the establishing of WTO, the multilateral trading system was finally institutionalized, and the GATT provisions were modified by incorporation of environmental concerns.

From the oil perspective, the WTO system does not comprise any special agreement dealing with energy issues. Instead, its general provisions of trade agreements are also applicable to oil trade.

3.2.1 The General Agreement on Tariffs and Trade

3.2.1.1 General remarks

Environmental protection was not the central concern when the GATT was initially drafted in 1947.⁵⁶ Indeed, the first wave of public concern with the degradation of the environment took place in the 1960s-1970s, when a number of trade and investment policy issues arose. Two world oil price shocks and inflation in industrial countries brought the second and more intense wave of public interest in environment in the 1970s.⁵⁷ This led to the 1972 UN Stockholm Conference on the Human Environment, and the

⁵³ Bugge Thorbjørn Daniel ”WTO Adjudication- an institutional analysis of adjudicative balancing of competing interests- exemplified with developments in interpretation of GATT Article II and XX”, Forlaget Thomson, pp. 58-59

⁵⁴ http://www.wto.org/english/tratop_e/envir_e/issu5_e.htm, the “Decision on Trade and Environment” (latest visited 01-11-2007)

⁵⁵ See footnote 39

⁵⁶ Egelund Olsen, Birgitte/Steinicke, Michael /Engsig Soerensen, Karsten ”WTO Law- from a European perspective”, Forlaget Thomson, pp.234

⁵⁷ Anderson, Kim/ Blackhurst, Richard “The greening of world trade issues”, published 1992 by Harvester Wheatsheaf , p.3

environmental issues were included in the context of the GATT. Nonetheless, they did not get much of practical significance, and, as it has been mentioned before, the real first steps towards the formation of the modern trade and environmental policies were made during 1986-94 Uruguay Round negotiations.

3.2.1.2 Fundamental GATT provisions as applied to energy sector

The general principles underlying the GATT constitute a cornerstone of the multilateral trading system and are fully applicable to energy sector. They are intended to ensure a sustainable international trading environment through reducing or elimination of trade barriers.

Article I establishes the Most-Favoured-Nation-Principle (herein referred to as MFN), that is intended to ensure that WTO Members *immediately* and *unconditionally* extend any advantage, favour, privilege or immunity granted to any product originating in or destined for any country to the like product originating in or destined for the territories of all other contracting parties. The MFN principle applies to “customs duties and charges of any kind imposed on or in connection with importation or exportation or imposed on the international transfer of payments for imports or exports, and with respect to the method of levying such duties and charges, and with respect to all matters...”⁵⁸ and formalities in connection with importation and exportation.

The second fundamental principle of GATT is the National Treatment. Art. III requires that, with respect to internal taxation and domestic laws, regulations and requirements, imported and domestic products shall be treated equally.

Article XI prohibits quantitative restrictions such as quotas, import and export licenses and other related measures. Though, certain exceptions allowing departure from the general principle are mentioned in the article. Article XI:2 (a) that allows to temporarily invoke export prohibitions in order to relieve critical shortages of products essential to the exporting contracting party is also highly relevant to energy sector. Thus, if a country is in critically short supply of energy material, export bans or quota on exports of an “essential product” can be allowed on a provisional basis.

3.2.1.3 Article XX exceptions- XX (g)

In view of the foregoing, the fundamental principles of the GATT share the same objective- to ensure the effectiveness of free trade. Yet, liberalization of trade is often depicted as a contrast to environmental concerns for the

⁵⁸ http://www.wto.org/english/docs_e/legal_e/gatt47_e.pdf

reason that they share different policy goals.⁵⁹ The question that arises in this regard is how the GATT deals with the environmental issues, particularly the principle of sustainable development in the context of oil trade.

The central GATT provisions dealing with the environmental concerns are the exceptions of the article XX (b) and (g). Since the provisions of XX (g) refer to measures relating to the conservation of exhaustible natural resources and, thus, are principally applicable to the energy sector, inter alia, oil trade, I will limit my discussion to the provisions of Article XX (g).

The XX (g) provision of GATT is of great importance for international oil trade not only because oil is an exhaustible natural resource, and the provision is in principal aimed to restrict trade in such resources. The primary interest lies within the form and character of the application of Article XX (g).

A party invoking the provisions of Article XX (g) has to prove the following:

- 1). that the measure in question concerns the conservation of *exhaustible natural resource*;
- 2). that the measure in question *relates to* the conservation of exhaustible natural resources;
- 3). that the measure is made effective *in conjunction with* restrictions on domestic production or consumption.

The first requirement has been interpreted in a rather broad way so that it should include both, living and non-living natural resources.⁶⁰

In order to qualify the measure as “relating to” conservation falling within the scope of Article XX (g), the measure concerned should primarily *be aimed* at conserving an exhaustible natural resource.⁶¹ As it was further clarified in *US- Gasoline case*, such a measure should reveal a “substantial relationship” with, and not merely “incidentally or inadvertently aimed at” conservation of natural resources.⁶²

⁵⁹ Filjalowski, Agatha/Cameron, James “*Trade and Environment: Bridging the Gap*”, the article by Thomas Cottier “The WTO and environmental law: three points for discussion”, pp. 56-57

⁶⁰*United States- Import Prohibition of Certain Shrimp and Shrimp Products*, AB-1998-4, Report of Appellate Body, pp. 46-51, particularly para. 130, available at <http://wto.org> (latest visited 08-10-2007)

⁶¹*Canada- Measures affecting Exports of Unprocessed Herring and Salmon*, Report of the Panel adopted on 22 March 1998 (L/6268-35S/98), para. 4.6, available at <http://www.worldtradelaw.net/reports/gattpanels/canadaherring.pdf> (latest visited 19-10-2007)

⁶²*United States- Standards for Reformulated and Conventional Gasoline* AB-1996-1, Report of the Appellate Body, pp.18-21, available at <http://wto.org> (latest visited 08-10-2007)

As to the third measure, it requires *even-handedness* in the imposition of restrictions, and no identical treatment is required.⁶³

If the measure has satisfied one of the aforementioned conditions, the chapeau requirement needs to be subsequently satisfied. It provides that the measures must not be applied “...in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail, or a disguised restriction on international trade...”⁶⁴ Thus, three requirements shall be satisfied under the chapeau of Article XX:

- 1). there must be no *arbitrary* discrimination between countries where the same conditions prevail;
- 2). there must be no *unjustified* discrimination between countries where the same conditions prevail;
- 3). there must be no *disguised* restriction on international trade.⁶⁵

The standards established in the chapeau are intended to prevent the abuse of the exemptions of Article XX. The chapeau has been interpreted in *US-Shrimp* case, and the Panel found that “The task of interpreting and applying the chapeau is...essentially the delicate one of locating and marking out a line of equilibrium...”⁶⁶ Furthermore, it was held “...that the application of a measure may be characterized as amounting to an abuse or misuse of an exception of Article XX not only when the detailed operating provisions of the measure prescribe the arbitrary or unjustifiable activity, but also where a measure, otherwise fair and just on its face, is actually applied in an arbitrary or unjustifiable manner.”⁶⁷

The GATT/WTO jurisprudence in the energy sector is highly limited. Throughout GATT/WTO history, only two petroleum-related cases were fully litigated to the end. The *Superfund* case (*United States—Taxes on Petroleum and Certain Imported Substances*) under the GATT challenged the legality of US measures imposing discriminatory tax rates on imported and domestic petroleum as well as taxes imposed on certain imported substances that were allegedly not imposed on like domestic products.⁶⁸

⁶³ *Ibid.* pp.21-22

⁶⁴ GATT, Article XX (g), available at http://www.wto.org/english/docs_e/legal_e/gatt47_e.pdf (latest visited 08-10-2007)

⁶⁵ Olsen, Birgitte Egelund / Steinicke, Michael/ Engsig Soerensen, Karsten ”*WTO Law from a European perspective*”, Forlaget Thomson, pp.254-258

⁶⁶ *United States- Import Prohibition of Certain Shrimp and Shrimp Products*, AB-1998-4, Report of Appellate Body, para. 159, available at <http://wto.org> (latest visited 08-10-2007)

⁶⁷ http://www.wto.org/english/tratop_e/dispu_e/distab_e.htm#r58, US- Shrimp case, Panel Report, para.160

⁶⁸ Dr Melaku Geboye Desta, adraft for TDM 2 ”*GATT/WTO Jurisprudence in the Energy Sector and Movements in the Marketplace*”, Transnational Dispute Management, Volume1, issue #02- May 2004, available at <http://www.transnational-dispute-management.com/samples/freearticles/tv1-2-article32a.htm> (latest visited 14-11-2007)

However, the *U.S. Gasoline case* is a more significant case, as it deals with both, energy and environmental issues. To begin with, it was the first case resolved through the Panel/AB procedure after the WTO was established. Furthermore, it has become an essential precedent for the application of the GATT Article XX (g), and highlights the complexity in the application of the implied limits. Finally, it is one of the most cited and controversial cases.

The Gasoline Case involved a dispute between the United States and Venezuela/Brazil over the implementation of the U.S. Clean Air Act. In 1990, the U.S. Congress amended the Clean Air Act in order to reduce pollution. Two baselines standards - individual and statutory- were defined in so-called “Gasoline Rule”. Domestic refiners were allowed to use either of them, while non- domestic producers were obliged to apply the statutory baseline.

The Panel found that the Gasoline Rule in fact prevented imported gasoline from benefiting from an individual baseline; thus, the imported gasoline was treated “less favourably” than domestic gasoline. This inconsistency was not justified under Article XX (g).

The AB concluded that “the Panel erred in law in its conclusion that the baseline establishment rules did not fall within the terms of Article XX(g) of the General Agreement [T]he Panel accordingly also erred in law in failing to decide whether the baseline establishment rules fell within the ambit of the chapeau of Article XX of the General Agreement.”⁶⁹ The AB ruled that the baseline establishment rules failed to meet the requirements of the chapeau of Article XX of GATT 1994, and accordingly were not justified under this statute.

From the oil perspective, *US- Gasoline case* has its own significant features:

- the case was initiated by an OPEC-cum-WTO member – Venezuela/Brazil;
- the interest of affected private operators (*Petroleos de Venezuela, S.A.*) was thoroughly discussed in the panel report;
- clean air was interpreted as an exhaustible natural resource in the sense of Article XX(g) - complementing the AB’s recognition in *Shrimp/Turtle* that petroleum is an exhaustible resource.

US- Gasoline case not only illustrates the difficulties in application of the exceptions under Article XX (g), but also has a significant implication for petroleum exporting countries, because it legitimizes future petroleum import restrictions on the basis of maintaining air cleanliness.

⁶⁹ *United States- Standards for Reformulated and Conventional Gasoline AB-1996-1*, Report of the Appellate Body, p.29, available at <http://wto.org> (latest visited 08-10-2007)

In this context, the issue of possible environmental requirements posed on imported crude oil arises. For the purpose of maintaining air cleanliness, the requirements may be primarily posed on the physical properties of the traded crude oil. In particular, such import restrictions as specific carbon dioxide taxes, volume limitations or trade bans may come into play to limit trade in heavy crudes that are more environmentally damaging than light crude oils. Such environmental requirements would be effective under condition that they satisfy other GATT requirements (for instance, not applicable in a discriminatory way).

Another issue that is relevant to the application of XX (g) exception in the oil context, and thus deserves a special attention is the odds of conflicting obligations of the OPEC and the WTO. The famous *Lautenberg Report*⁷⁰, released on July, 2004 asserts that countries that are members of both the WTO and the OPEC and that abide by OPEC-mandated oil production quotas, are thereby in violation of GATT Article XI prohibition on quantitative export restrictions. However, there is an implication that OPEC Members could invoke the Article XX (g) and would likely be able to assert Article XX (g) as an affirmative defense if their measures were found to violate Article XI.⁷¹ The allegation is, however, accompanied by divergent views as regards the legal issue of whether the restrictions could qualify in the context of Article XX exceptions as measures relating to the conservation of petroleum. For instance, one may say that OPEC's general goal is obviously a price target, not conservation, and there is thus no shelter under Article XX because any reference to conservation in such a context is simply a "disguised restriction on international trade" in violation of the Chapeau of Article XX. On the other hand, It is reasonable to argue that conservation of a mineral resource such as oil cannot be seen in isolation from the financial return of its exploitation for its owners and production restriction decisions caused by falling market prices could be construed as "relating to the conservation" of the resource.⁷²

As it has been mentioned above, the WTO/GATT rules that govern international trade are fully applicable to trade in oil. On the one hand, the WTO provides a very effective framework, including for the settlement of disputes. This system is flexible enough to address major issues in the energy sector. On the other hand, energy sector poses a number of distinctive features where more energy-specific rules may be needed. In particular, a significant part of international oil trade is linked to fixed infrastructure, built specifically for the purpose of carrying hydrocarbons. That puts an additional premium: the framework for investment in highly

⁷⁰ *Lautenberg Report*, available at <http://www.lautenberg.senate.gov> (latest visited 09-09-2007)

⁷¹ Broome, Stephen A. "*Conflicting Obligations for Oil Exporting Nations?: Satisfying Membership Requirements of both OPEC and the WTO*", the George Washington International Law Review, 2006, available at <http://lautenberg.senate.gov/newsroom/record.cfm?id=254218> (latest visited 15-11-2007)

⁷² International Economic Law and policy Blog "*OPEC, WTO and Hotelling's Rule*", available at http://worldtradelaw.typepad.com/ielpblog/2006/11/opec_and_wto.html (latest visited 15-11-2007)

capital-intensive and environmentally friendly infrastructure projects; and the conditions for access to these networks. Bearing in mind that conventionally multilateral agreements are difficult to negotiate and the peculiarities of the energy sector (especially with respect to security of supply and environmental concerns), negotiation of energy-specific rules appear fluid.⁷³

The GATT XX (g) exceptional provisions are fully applicable to oil sector and represent an attempt to find a balance between the promoting of environmental goals and the ensuring that the restricting measures are not applied in ways that restrict trade beyond what is necessary to promote such goals. To have legitimacy, trade-related measures shall not only fall within the scope of Article XX (g), but also shall meet the conditions imposed by the Chapeau of Article XX. As illustrated by case law (though, limited in scope), such an approach seeks to impose considerable additional restrictions on the scope of national environmental policies. The strict chapeau requirements as a mechanism for preventing the misuse of the exception and a means of obtaining an adequate equilibrium between the rights and duties of WTO Members appears to be a significant hinder in invoking restricting measures. In addition, the interpretation of the measures is rather a controversial issue.

The existence of difficulties in application of the Article XX (g) provisions is supported by the mere fact that an incredibly limited number of XX (g) cases have been litigated to the end. The critics of the *Lautenberg Report* suggest that there is a possibility for the countries that are both Members of the OPEC and WTO to invoke XX (g) exceptions for their defense, if they are claimed to be in violation of GATT Article XI prohibition on quantitative export restrictions by using the OPEC prescribed oil quotas. However, this remains a mere allegation, and it is difficult to determine how AB would interpret the restriction.

Lastly, the whole flexible WTO/GATT system lacks more energy-specific rules, and needs to be amended- something that appears rather fluid for the moment. Such rules should be designed to consider specific energy-related issues in the context of cross-border oil trade (for instance, the issue of governing of access to a fixed infrastructure, built specifically for the purpose of carrying hydrocarbons).

3.2.2 Technical Barriers to Trade

3.2.2.1 General remarks

Of particular significance for countries involved in cross-border oil trade is the **Technical Barriers to Trade (TBT)** Agreement, as technical

⁷³ The speech of Secretary General André Mernier at the World Energy Council, Rome, 2007, available at http://www.encharter.org/index.php?id=59&id_article=125&L=0 (latest visited 30-11-2007)

regulations and standards are widely used for energy products and materials as well as energy-consuming end uses devices.⁷⁴ TBT is a multilateral side WTO agreement intended to ensure that those regulations, standards, testing and certification procedures do not create unnecessary obstacles to trade.⁷⁵ It also contains a rather strong enforcement mechanism, being subject to the WTO's Dispute Settlement Understanding.

Mandatory regulations and procedures imposed by governments at the border can create serious distortions in commercial markets by restricting of market access for imported goods or by imposing discriminatory or unjustifiable costs to such goods. Domestic regulatory systems may limit market entry through, inter alia, environmental mandates not based on international norms. These requirements may also be discriminatory within the context of WTO disciplines, including commitments undertaken by WTO members in the TBT agreement.⁷⁶

TBT rules are designed to eliminate the use of standards-related measures as barriers to trade and have 3 fields of application: technical regulations, standards, and conformity assessment procedures. The TBT provisions leave Members with sufficient domestic policy autonomy to pursue legitimate regulatory objectives.

3.2.2.2 Environmental aspects of the TBT Agreement

The wording of TBT provisions does not explicitly refer to the principle of sustainable development. However, environmental concerns are emerged in the Preamble that is in line with the key purpose of the Agreement:

*"... Recognizing that no country should be prevented from taking measures necessary to ensure the quality of its exports, or for the protection of human, animal or plant life or health, of the environment, or for the prevention of deceptive practices, at the levels it considers appropriate, subject to the requirement that they are not applied in a manner which would constitute a means of arbitrary or unjustifiable discrimination between countries where the same conditions prevail or a disguised restriction on international trade..."*⁷⁷

The TBT Agreement also dictates the requirements that must be met (inter alia, transparency in developing the rules, notification, the use of international standards), which are highly relevant to environmental

⁷⁴ Selivanova, Yulia "The WTO and Energy, WTO Rules and Agreements of Relevance for the Energy Sector", Energy Charter Secretariat, ICTSD Programme on Trade and Environment, August 2007, p. 41

⁷⁵ http://www.wto.org/english/thewto_e/whatis_e/tif_e/agrm4_e.htm#TRS

⁷⁶ Maskus, Keith E./ Wilson, John S./ Otsuki, Tsunehiro "Qualifying the Impact of Technical Barriers to Trade – A Framework for Analysis, The World Bank Development Research Group Trade, December 2000, p. 3

⁷⁷ Technical Barriers to Trade Agreement, Preamble, available at http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm (latest visited 29-10-2007)

considerations. For instance, in order to safeguard transparency, Members must notify when both sets of conditions are applied:

- 1) whenever a relevant international standard or guide or recommendation does not exist, or the technical content of a proposed or adopted technical regulation or procedure is not in accordance with the technical content of relevant international standards or guides of recommendations;
- 2) if the technical regulation or conformity assessment procedure may have a significant effect on the trade of other Members.⁷⁸

The conditions are, indeed, designed to encourage Members to use international standards (and, consequently, enhanced technique).

Another central pillar of the TBT Agreement is harmonization, also highly relevant to environmental issues. It is found in Articles 2.4-2.6 (for technical regulations), Annex 3(F)-(G) - Code of Good Practice- (for standards), Articles 5.4 and 5.5 (for conformity assessment procedures) and is also intended to encourage Members to participate in the international harmonization of standards, and to use agreed international standards as a basis for domestic technical regulations and standards.⁷⁹

Article 2 of the TBT Agreement states that technical regulations must involve “*treatment no less favourable than that accorded to like products of national origin*”.⁸⁰ It also states that such measures should not constitute “*unnecessary obstacles to international trade*”.⁸¹ Article 2.2 provides also that technical regulations cannot be more trade restrictive than necessary to achieve a policy goal.

Technical regulations must fulfill a legitimate objective. Against this background, the legitimate objectives that justify technical barriers to trade are defined in Article 2.2 in a rather broad sense:

- national security requirements;
- the prevention of deceptive practices;
- protection of human health or safety;
- animal or plant life;
- health;
- the environment

⁷⁸ Technical Barriers to Trade Agreement, Article 2.9 and 5.6, available at http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm (latest visited 29-10-2007)

⁷⁹ United Nations Conference on Trade and Development, *Dispute Settlement, World Trade Organization, 3.10 Technical Barriers to Trade*, United Nations, New York and Geneva, 2003 p. 25

⁸⁰ Technical Barriers to Trade Agreement, Article 2.1, available at http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm (latest visited 29-10-2007)

⁸¹ Technical Barriers to Trade Agreement, Article 2.2, available at http://www.wto.org/english/docs_e/legal_e/17-tbt_e.htm (latest visited 29-10-2007)

In the context of cross-border crude oil trade, the following technical standards and regulations may come into play: certifications on physical properties of oil (for instance, contaminants-free crude oil); technical regulations concerning the use of clean and efficient technologies at the exploration and production stages; certification requirements confirming that crude oil and “special wastes”⁸² have been disposed in the most environmentally sound way.

The use of technical regulations and standards for sustainable trade in oil can be justified on any of the above mentioned grounds, including that of conservation of exhaustible natural resources. Although conservation of exhaustible natural resources is not mentioned on the list of the legitimate objectives, one shall keep in mind that the list is not exhaustive.

To achieve the legitimate objective (in our case protection of environment in conjunction with protection of an exhaustible natural resource), a serious effort is required to find a good balance in application of the TBT provisions. On the one hand, the legitimate policy interests can be easily thwarted, if the TBT provisions are applied too strictly. On the other hand, if the TBT is applied too laxly, technical regulations may be used for protectionist purposes.⁸³ The TBT Agreement seeks to balance the prevention of protectionism with the right of a Member to enact product regulations for legitimate public policy (allowing Members sufficient regulatory autonomy to pursue necessary domestic policy objectives).

Another difficulty that arises in respect of application of the TBT provisions is that there is a lack of an established line of case law on the issue.

In the light of the foregoing discussion, it remains to be mentioned that natural resources in general and oil in particular, appear to obtain a rather modest role in the context. Despite the fact that the early reference to natural resources was made prior to the TBT Agreement entered into force (the Secretariat noted that petroleum and other fuels are often regulated according to the environmental hazard passed by the emissions created when burning them⁸⁴), they are not mentioned separately in the Agreement.

To summarize, the TBT provisions are found under the umbrella of the GATT Agreement and aim at eliminating of unnecessary obstacles to trade in the form of those regulations, standards, testing and certification procedures, which do not comply with international norms. For this purpose, a set of principles is provided, including those relevant to environmental issues. Natural resources are not referred to as a special concern, but they

⁸² Wastes generated from the exploration, development and production of crude oil (as categorized by EPA- United States Environmental protection Agency), consulted at <http://www.epa.gov/epaoswer/other/oil/index.htm> (latest visited 24-12-2007)

⁸³ United Nations Conference on Trade and Development, *Dispute Settlement, World Trade Organization, 3.10 Technical Barriers to Trade*, United Nations, New York and Geneva, 2003 p. 5

⁸⁴ Committee on Technical Barriers to Trade, *Note by the Secretariat*, TBT/W/156, 2 March 1992 p. 3

are closely linked to environmental issues. In application of the TBT provisions, one faces difficulty in finding a fine balance between the prevention of protectionism and the right of a Member to enact product regulations for legitimate public policy. A lack of an established line of case law is another issue that arises, when analyzing the TBT provisions.

Having concluded that the WTO Agreements relevant to international oil trade and sustainable development do contain provisions that take into consideration environmental concerns, but being difficultly applicable in practice, I will close this chapter and perceive with analyzing if, and how the principle of sustainable development is safeguarded in plurilateral sectoral agreements, particularly, Energy Charter Treaty – an international agreement most relevant to both, energy trade and environmental issues.

3.3 Plurilateral sectoral agreements

3.3.1 Energy Charter Treaty

3.3.1.1 General remarks

The Energy Charter Treaty stems from a political initiative launched in Europe at the time of the end of the Cold War. In the early 1990, the need to overcome the economic divisions in Europe was recognized, and the Energy Charter Treaty together with Protocol on Energy Efficiency and Related Environmental Aspects became the essential multilateral framework for energy cooperation.⁸⁵

The uniqueness of the Energy Charter Treaty lies within its objective to promote energy security through the liberalization of energy markets, while respecting the principles of sustainable development and sovereignty over energy resources. In addition to the fact that the ECT has incorporated all essential WTO provisions concerning trade in goods (including MFN, NT, prohibition of QRs), WTO state trading provisions and TBT, it also has incorporated investment provisions and a special Protocol on Energy Efficiency. ECT is broader than WTO, and it integrates WTO rules with respect to energy trade to non-WTO countries that are members of the ECT. Besides, the ECT is the first binding international legal document that imposes obligations on states to reduce energy consumption in all sectors of economy.⁸⁶ Moreover, the scope of application of the Treaty⁸⁷ is potentially worldwide due to the astonishing number of states that either have signed or acceded to the Energy Charter Treaty- in total, 52 parties.⁸⁸

⁸⁵ Energy Charter Secretariat, *The Energy Charter Treaty and Related Documents, a legal framework for International Energy Cooperation*, p.13

⁸⁶ Bradbrook, A.J. “*Significance of the Energy Charter Treaty*”, Faculty of Law, University of Adelaide, p.1

⁸⁷ Meaning the Energy Charter Treaty and its associated protocol

⁸⁸ www.encharter.org (latest visited 27-10-2007)

A broad range of issues important to the international energy sector is covered by the provision of the Treaty:

- the protection of foreign energy *investments*, based on the extension of national treatment, or MFN treatment (Articles 10, 13 and 14);
- non-discriminatory conditions for *trade* in energy materials, products and energy-related equipment based on WTO rules (Article 4 and 29);
- provisions to ensure freedom of energy *transit* flows through pipelines, grids and other means of transportation (Article 7);
- mechanisms for the resolution of state- to-state or investor-to-state *disputes* (Articles 26, 27);
- the promotion of *energy efficiency* (the Preamble and the Protocol on Energy Efficiency);
- reducing the *environmental impact* of energy production and use (Article 19).

3.3.1.2 Environmental provisions of the ECT

The mission of the Energy Charter Treaty process is formulated in the Preamble, Article 1 and 2 of the Treaty: the Members should strive towards open, efficient, sustainable and secure energy market. The ECT's Preamble recalls the UNFCCC, the Convention on Long-Range Transboundary Air Pollution and its protocols, and other international environmental agreements with energy-related aspects; and recognizes “the increasingly urgent need for measures to protect the environment [...]”⁸⁹

In this context, sustainability constitutes one of the key pillars of the ECT and is found in several provisions. It is possible to distinguish 3 types of the provisions referring to the principle of sustainable development:

- the provisions that allow for economic and social development and aimed at protecting the environment;
- the provisions that specifically refer to sustainable development;
- the provisions that contain references to other international agreements that support sustainable development⁹⁰

The protection of the environment and the promotion of sustainable development are legitimate objectives of the ECT, and they are reaffirmed in the Article 2.

The ECT's Preamble and Article 1 and 2 may fall within the scope of the last type of the provisions. However, there are other Treaty provisions

⁸⁹ The Energy Charter Treaty, Preamble

⁹⁰ Chalker, James “*Making the investment provisions of the Energy Charter Treaty sustainable development friendly*”, Published online: 25 October 2006, Springer, Science and Business Media B.V. 2006, p. 440

offering a more direct support for the promotion of sustainable development. For instance, Article 18 deserves attention in the context, because it affirms state sovereignty over natural resources and recognizes the right of states “to regulate the environmental and safety aspects of”⁹¹ the exploration and development of energy resources. And the most central provisions offering an extensive environmental protection underlie the Article 19 and Protocol on Energy Efficiency and Related Environmental Aspects.

3.3.1.3 Protocol on Energy Efficiency and Related Environmental Aspects

Before I perceive with the discussion around the central article, as regards the principle of sustainable development, a few words should be said about Protocol on Energy Efficiency – an essential document directly supporting the linkage between energy efficiency and sustainable development.

The objectives of the Protocol on Energy Efficiency are included in the Article 1:

(a) the promotion of energy efficiency policies consistent with sustainable development;

(b) the creation of framework conditions which induce producers and consumers to use energy as economically, efficiently and environmentally soundly as possible, particularly through the organization of efficient energy markets and a fuller reflection of environmental costs and benefits; and

*(c) the fostering of co-operation in the field of energy efficiency.*⁹²

In order to achieve the objectives, the Protocol imposes obligations on the parties to take action in support of energy efficiency at both the national (Articles 3, 5, 8) and international (Article 3.1, 3.5, 3.7) levels.

Article 3 entails the parties to “develop and implement energy efficiency policies, laws and regulations”⁹³, while article 8 states that each party “shall develop, implement and regularly update energy efficiency programmes best suited to its circumstances”.⁹⁴

Article 5 requires that the parties shall formulate strategies and policy aims for “Improving Energy efficiency and thereby reducing Environmental Impacts of the Energy Cycle, as appropriate in relation to their own specific energy conditions”.⁹⁵

⁹¹ Energy Charter Charter Protocol on Energy Efficiency and Related Environmental Aspects, Article 18

⁹² Energy Charter Charter Protocol on Energy Efficiency and Related Environmental Aspects, Article 1, available at

http://www.encharter.org/fileadmin/user_upload/document/EN.pdf

⁹³ *Ibid.* article 3

⁹⁴ *Ibid.* article 8

⁹⁵ *Ibid.* article 5

As to the international level, Article 3.1 provides that “Contracting Parties shall co-operate and, as appropriate, assist each other in developing and implementing energy efficiency policies, laws and regulations.”⁹⁶ They should “take into account the differences in adverse effects and abatement costs between Contracting Parties”⁹⁷, and “co-operative or coordinated action shall take into account relevant principles adopted in international agreements, aimed at protection and improvement of the environment...”⁹⁸

The conclusion that can be drawn in the light of the foregoing is that the Protocol puts a wide range of obligations on the members to achieve its key objectives, as described above. It purports to cover the issue in the most comprehensive way. What should be kept in mind in this contest is that the instruments that allow the members to achieve the objective are highly relevant for our discussion, because the Protocol has established a clear link between energy efficiency and sustainable development.

Indeed, the acceptance of the concept that energy efficiency can in itself amount to an energy resource and, thus, establishing a link between energy efficiency and sustainable development is a remarkable achievement of the Protocol. Other than supporting this linkage of energy efficiency and sustainable development, the Protocol holds the possibility for its members to create a more ambitious vehicle for achieving both goals.⁹⁹ Another significant feature of the Protocol is that it represents a further step towards the internationalization of energy law.

Nonetheless, the environmental issues do generally associate with the Article 19 of the ECT.

3.3.1.4 Article 19

Article 19 begins with a broad recommendation:

“[i]n pursuit of sustainable development and taking into account its obligations under those international agreements concerning the environment to which it is a party, each Contracting Party shall strive to minimize in an economically efficient manner harmful [e]nvironmental [i]mpacts occurring within or outside its”¹⁰⁰ territory. In doing so, contracting parties should “[...] strive to take precautionary measures to prevent or minimize environmental degradation. The Contracting Parties agree that the polluter in the Areas of Contracting Parties, should, in

⁹⁶ *Ibid.* article 3.

⁹⁷ *Ibid.* article 3.5

⁹⁸ *Ibid.* article 3.7

⁹⁹ Chalker, James “*Making the investment provisions of the Energy Charter Treaty sustainable development friendly*”, Published online: 25 October 2006, Springer, Science and Business Media B.V. 2006, p. 441

¹⁰⁰ Energy Charter Treaty, Article 19

principle, bear the cost of pollution, including transboundary pollution, with due regard to the public interest and without distorting Investment in the Energy Cycle or international trade."¹⁰¹

Accordingly, Article 19 is entirely oriented around environmental considerations. It also represents an important development of international environmental law and international energy law. Likewise the Protocol on Energy Efficiency, Article 19 recognizes the significance of energy efficiency to international environmental law:

*"[...] have particular regard to [i]mproving [e]nergy [e]fficiency"*¹⁰²

Such a refocusing of international environmental law (that traditionally has been preoccupied with water and air quality standards, and has ignored the choice of fuels for energy production) has benefited to minimizing of the adverse affects of energy production.¹⁰³

The question that arises in this context is whether the provisions of Article 19 provide an effective environmental protection. Already at the first look, a number of disadvantages appears to be obvious:

- The wording of the Article incorporates environmental consideration in a non-binding loose form;
- Consequently, the obligations cannot be enforced in any international forum;
- The environmental effectiveness of the Article is also reduced by the fact that certain key countries in respect of energy efficiency are outside the scope of the Agreement (inter alia, the USA, China and India),¹⁰⁴
- The wording of the Article suggests that environmental obligations are secondary to economic considerations (meaning that members shall act in a "cost-effective" and "economically efficient" manner for the purpose of fulfilling environmental obligations);¹⁰⁵
- The absence of mandatory targets for environmental improvements is another clear weakness of the Article;

¹⁰¹ *Ibid.* Article 19

¹⁰² *Ibid.* Article 19

¹⁰³ Bradbrook, A.J "Significance of the Energy Charter Treaty", Faculty of Law, University of Adelaide, p.260

¹⁰⁴ The ECT signatories are: Albania, Armenia, Austria, Australia(*), Azerbaijan, Belarus(**), Belgium, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Cyprus, Denmark, Estonia, European Communities, Finland, France, Georgia, Germany, Greece, Hungary, Iceland(*), Ireland, Italy, Japan, Kazakhstan, Kyrgyzstan, Latvia, Liechtenstein, Lithuania, Luxembourg, Malta, Moldova, Mongolia, Netherlands, Norway(*), Poland, Portugal, Romania, Russian Federation(**), Slovakia, Slovenia, Spain, Sweden, Switzerland, Tajikistan, The former Yugoslav Republic of Macedonia, Turkey, Turkmenistan, Ukraine, Uzbekistan, United Kingdom. (*) **Country which has not ratified the Treaty**, (**) **country which has not ratified the Treaty but which applies it provisionally**. Azerbaijan, Belarus, Kazakhstan, Tajikistan, Russian Federation, Ukraine, Uzbekistan are in the WTO accession process.

¹⁰⁵ Energy Charter Treaty, Article 19

- The provisions also lack a clear reference to energy efficiency measures.

Such an ambitious wording of Article 19 has, in fact, turned to be only a weak attempt to draw attention to environmental concerns. It is merely suggestive, and is open for a great variety of interpretations. Consequently, the effectiveness of the Article is handicapped.

Energy Charter Treaty with its Protocol on Energy Efficiency – even broader than the WTO agreement in its scope - is the most significant legal instrument in respect of energy efficiency. It has not only incorporated a broad range of trade provisions relevant for energy sector, but also has called for the need of environmental protection. However, the ambiguous environmental provisions of the ECT and the Protocol suffer from a great number of weaknesses.

The next chapter will illustrate how sustainability is safeguarded in the most famous regional integration agreement as applied to international oil trade – NAFTA.

3.4 Regional Integration Agreements

3.4.1 RIAs in general

The growth of regional integration agreements is one of the recent tendencies of the international relations. The structure of RIAs varies immensely, but they all share the same purpose - that of reducing or eliminating barriers to trade between member countries and promoting of a global economic integration.

Despite some debate whether RIAs in reality support or impede global economic integration, the common approach still remains that regional integration serves as an important tool to promote free trade, political and economic integration.

For instance, members of a regional agreement may perceive benefits using a regional agreement as a basis for increasing security against nonmembers. Indeed, the idea that increasing trade reduces the risk of conflict goes back to the Emanuel Kant's *Perpetual Peace* (1795). The common action in the economic sphere makes common action for security more credible.

Further, regional integration increases bargaining power. The underlying idea is that of solidarity and making the weak to become strong.

Lastly, a regional agreement can have a positive effect on domestic politics by providing a “commitment mechanism” for trade and other policy reform measures.

As to the economic benefits, RIAs have a potential to enhance competition in industrial sectors and strengthen the economy of the members.¹⁰⁶

It follows from the aforesaid, that the formation of RIAs may lead to positive political and economic effects. But do they also address environmental and other sustainable development concerns?

The principle of sustainable development is recognized as an objective of global and regional trade law and policy, and an explicit commitment to promote sustainable development is found in preambles of many RIAs.¹⁰⁷

Regionalism may, indeed, have a positive impact as regards the promotion of sustainable development. Conventionally, approximation of environmental and social standards is easier at the regional than at the global level. However, different levels of economic development often constitute an obstacle to forming common environmental policies.¹⁰⁸

Currently, there exists a great number of RIAs - inter alia, EU, CACM, ECOWAS, ASEAN, APEC, SACU¹⁰⁹ - each of them located within a specific geographic area. The most known and powerful RIA related to international oil trade is **The North American Free Trade Agreement**.

3.4.2 NAFTA

3.4.2.1 General remarks

NAFTA was established by the United States, Canada and Mexico and took effect in 1994. It was the result of intense political negotiations, as well as it was a radical experiment, whereby the three nations with essentially different levels of development merged.¹¹⁰

For the purpose of this Thesis, NAFTA is indisputably one of the most central international trade agreements.

First and foremost, NAFTA has formed the world's largest free trade area. Even more, though NAFTA is significant due to the fact that it has spanned the North and the South, the agreement is often seen in a number of developing countries as the model of *continental* agreement.¹¹¹

¹⁰⁶ <http://www.oecd.org/dataoecd/39/37/1923431.pdf>

¹⁰⁷ Bartels, Larand, Ortino, Federico "Regional Trade Agreements and the WTO Legal System", Oxford University Press, 2006, p.313 (Cordonier Segger, Marie-Claire "Sustainable Development in Regional Trade Agreements")

¹⁰⁸ http://www.trade-environment.org/page/ictsd/Bridges_Monthly/RTA_1_99.pdf (latest visited 26-10-2007)

¹⁰⁹ <http://www.oecd.org/dataoecd/39/37/1923431.pdf> (latest visited 26-10-2007)

¹¹⁰ The homepage of *Public citizen*. a US national, non-profit consumer advocacy organization <http://www.citizen.org/trade/nafta/> (latest visited 26-10-2007)

¹¹¹ <http://www.oecd.org/dataoecd/39/37/1923431.pdf> (latest visited 26-10-2007)

Secondly, it contains specifically an energy chapter (chapter 6), which applies to measures relating to energy and basic petrochemical goods and covers measures relating to investment and to cross-border trade in services associated with such goods.¹¹²

Further, NAFTA is a highly controversial agreement and has been subject to divergent views. Already prior to the ratification process, NAFTA had a great number of opponents, primarily environmentalists arguing that it would threaten health and environmental standards.¹¹³

However, NAFTA is often seen as a foundation for the future prosperity of the three countries. The effects of NAFTA are depicted as astonishing. It has, inter alia, enhanced economic activity in the region and has had a positive effect on investment. By using a major Northern economy, Mexico increased its credibility and considerably recovered from the Peso Crisis.

A number of the studies on the effects of NAFTA suggests that its economic effects are broadly positive on major indicators such as income equality and trade diversion.¹¹⁴

In political and social terms, NAFTA is seen not only as a trade treaty but also as a powerful political and cultural force. It has spanned the Continent and promoted the better understanding of the cultures, as well as it has improved working conditions.

The economic collaboration promoted by NAFTA has encouraged better environmental performance across the region by facilitating the transfer of green technologies and market-based solutions.¹¹⁵

Another remarkable feature of NAFTA is that Mexico has made a number of reservations because of the limitations that the Constitution imposes on foreign investments in oil and gas.

In addition to all, promotion of sustainable development has been one of the underlying ideas of NAFTA. In this respect, NAFTA's statement of objectives is important, since the members have agreed to interpret and apply NAFTA in the light of those objectives.¹¹⁶

¹¹² Consolidated text of NAFTA is available at http://www.nafta-sec-alena.org/DefaultSite/index_e.aspx?DetailID=78 (latest visited 26-10-2007)

¹¹³ The homepage of *Public citizen*, a US national, non-profit consumer advocacy organization <http://www.citizen.org/trade/nafta/> (latest visited 26-10-2007)

¹¹⁴ Commission for Environmental Cooperation "Assessing Environmental Effects of the North American Free Trade Agreement (NAFTA)- An analytic Framework (Phase II) and Issue Studies", Communications and Public Outreach Department of the CEC Secretariat, 1999, p. 20

¹¹⁵ The homepage of *Foreign Affairs and International Trade Canada* <http://www.dfait-maeci.gc.ca/nafta-alena/nafta10-en.pdf>

¹¹⁶ Folsom, Ralph "NAFTA and Free Trade in the Americas in a Nutshell", 2nd edition, Thomson West, 2004, p. 70

To understand NAFTA, one should constantly keep in mind two issues. First, foundations for NAFTA were laid down in CFTA¹¹⁷ that served as a model upon which NAFTA was built. In some areas, the terms of NAFTA remain almost identical to those of CFTA. In others, only minor changes were made in order to improve the earlier experiences.¹¹⁸

Second, NAFTA was implemented prior to conclusion of the Uruguay Round of GATT negotiations and the establishing of the WTO, and its relationship to the aforementioned agreements is complex. “The Parties affirm their existing rights and obligations with respect to each other under the *General Agreement on Tariffs and Trade* and other agreements to which such Parties are party”, and “in the event of any inconsistency between this Agreement and such other agreements, this Agreement shall prevail to the extent of the inconsistency, except as otherwise provided in this Agreement.”¹¹⁹

NAFTA affirms the applicability of the GATT “national treatment” and “most-favoured nation treatment” principles and is elaborated through the principle of transparency.¹²⁰ It is based on the so-called “GATT-plus” approach in the energy sector, as it interprets GATT principles in such a manner as to introduce new obligations.¹²¹ Consequently, the NAFTA rules go more deeply into restricting government powers than any other trade agreement to date. NAFTA covers state trading and competition policy, the areas not covered by the Uruguay Round. The Uruguay Round covers customs valuation and preshipment inspection, which is not covered by NAFTA.¹²²

In order to discern in what way NAFTA safeguards the principle of sustainable development in relation to oil trade, the energy chapter will be scrutinized. Next, the discussion will be focused around other provisions of NAFTA which provide tools for promoting of sustainability.

3.4.2.2 Chapter 6- Energy and Basic Petrochemicals

The Chapter 6 begins with defying principles that the parties should observe:

- Full respect for each others Constitutions;
- Enhancing the role of trade in energy and basic petrochemical goods through sustained and gradual liberalization;

¹¹⁷ The Canada- United States Free Trade Agreement was concluded in 1989.

¹¹⁸ Folsom, Ralph “*NAFTA and Free Trade in the Americas in a Nutshell*”, 2nd edition, Thomson West, 2004, p. 19

¹¹⁹ NAFTA, Article 103

¹²⁰ *Ibid.* article 102

¹²¹ <http://www.unctad.org/Templates/webflyer.asp?docid=2669&intItemID=2023&lang=1> (latest visited 14-11-2007)

¹²² Folsom, Ralph “*NAFTA and Free Trade in the Americas in a Nutshell*”, 2nd edition, Thomson West, 2004, pp. 71-73

- The importance of having viable and internationally competitive energy and petrochemical sectors to further their individual national interests¹²³

Thus, the major purpose of the energy chapter is promotion of trade liberalization of energy markets. However, it does not expressly refer to environmental concerns. Instead, the provisions directly referring to sustainability and environmental issues should be found in other chapters of NAFTA.

For the purpose of promotion of trade liberalization of energy markets, Article 603 recalls the provisions of GATT with respect to “prohibitions or restrictions on trade in energy and basic petrochemical goods. The Parties agree that this language does not incorporate their respective protocols of provisional application to the GATT”¹²⁴ (allowing some derogation, though).

The energy chapter also refers to the XX (g) exception of the GATT with respect to the export of an energy or basic petrochemical good to the territory of another Party. However, it interprets this GATT provision in a strict way:

a) the restriction should “not reduce the proportion of the total export shipments of the specific energy or basic petrochemical good made available to that other Party relative to the total supply of that good of the Party maintaining the restriction as compared to the proportion prevailing in the most recent 36month period for which data are available prior to the imposition of the measure, or in such other representative period on which the Parties may agree”;

b) the Party should “not impose a higher price for exports of an energy or basic petrochemical good to that other Party than the price charged for such good when consumed domestically, by means of any measure such as licenses, fees, taxation and minimum price requirements. The foregoing provision does not apply to a higher price that may result from a measure taken pursuant to subparagraph (a) that only restricts the volume of exports”;

*c) the restriction should “not require the disruption of normal channels of supply to that other Party or normal proportions among specific energy or basic petrochemical goods supplied to that other Party, such as, for example, between crude oil and refined products and among different categories of crude oil and of refined products”.*¹²⁵

¹²³ NAFTA, Article 601

¹²⁴ *Ibid.* article 603

¹²⁵ NAFTA, Article 605

It follows from the abovementioned that energy chapter suggests even a more limited space for derogation on the basis of conservation of exhaustible natural resources than the XX (g) exception of the GATT.

The provisions of NAFTA allow for a number of derogations justified by constitutional peculiarities. Thus, Mexico reserved for itself the following activities:

- exploration and exploitation of crude oil and natural gas; refining or processing of crude oil and natural gas; production of artificial gas, basic petrochemicals and their feedstock and pipelines;
- foreign trade, transportation, storage and distribution, up to and including the first-hand sales of
 - (i) crude oil,
 - (ii) natural and artificial gas,
 - (iii) goods covered by Chapter 6 obtained from the refining or processing of crude oil and natural gas, and
 - (iv) basic petrochemicals;¹²⁶

As a result, the coverage of NAFTA with respect to energy has been substantially limited through these important exemptions of Mexico. Furthermore, Mexico has not committed itself to energy sharing during the time of storage.¹²⁷

Although NAFTA contains a special energy chapter, its impact on the energy trade is not particularly noticeable. That could be explained by the fact that the three countries had already established quite a substantial trade in oil by the time of ratification of NAFTA.

In the next, I will look at other NAFTA provisions providing for environmental protection in cross-border oil trade.

3.4.2.3 NAFTA and Sustainable development

Environmental issues played a prominent role in the negotiation of the NAFTA, and it was presented as the “greenest” trade agreement ever made.¹²⁸ In fact, NAFTA contains five specific provisions that integrate the principle of sustainable development.

To begin with, NAFTA was the first international trade agreement to include in its preamble an express reference to sustainable development and

¹²⁶ NAFTA, Annex 602.3

¹²⁷ Folsom, Ralf, Gordon Michael Wallace “*International Trade and Economic Relations in a Nutshell*”, Thomson West, 2004, p. 265

¹²⁸ Kirton, John J. “*Linking Trade, Environment, and Social Cohesion- NAFTA experiences, global challenges*”, Ashgate Publishing Limited, 2002, p. 32

to recognize the objective of strengthening “the development and enforcement of environmental laws and regulations”.¹²⁹

Second, NAFTA establishes the principle of supremacy of a list of environmental treaties over itself:

1. “In the event of any inconsistency between this Agreement and the specific trade obligations set out in:

a) the *Convention on International Trade in Endangered Species of Wild Fauna and Flora*, done at Washington, March 3, 1973, as amended June 22, 1979,

b) the *Montreal Protocol on Substances that Deplete the Ozone Layer*, done at Montreal, September 16, 1987, as amended June 29, 1990,

c) the *Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal*, done at Basel, March 22, 1989, on its entry into force for Canada, Mexico and the United States, or

d) the agreements set out in Annex 104.1, 1.” (*The Agreement Between the Government of Canada and the Government of the United States of America Concerning the Transboundary Movement of Hazardous Waste*, signed at Ottawa, October 28, 1986 and

The Agreement Between the United States of America and the United Mexican States on Cooperation for the Protection and Improvement of the Environment in the Border Area, signed at La Paz, Baja California Sur, August 14, 1983).

However, “such obligations shall prevail to the extent of the inconsistency, provided that where a Party has a choice among equally effective and reasonably available means of complying with such obligations, the Party chooses the alternative that is the least inconsistent with the other provisions of this Agreement.

2. The Parties may agree in writing to modify Annex 104.1 to include any amendment to an agreement referred to in paragraph 1, and any other environmental or conservation agreement.”¹³⁰

Third, Chapter 9 on Technical Barriers to Trade affirms “...existing rights and obligations relating to standards-related measures under the *GATT Agreement on Technical Barriers to Trade* and all other international agreements, including environmental and conservation agreements, to which

¹²⁹ NAFTA, supra n. 3, Preamble

¹³⁰ NAFTA, Article 104, Annex 104.1

those Parties are party.”¹³¹ It is aimed at eliminating of unnecessary obstacles to trade and provides for the use of international standards and technical cooperation between the Parties. It allows each Party to “adopt, maintain or apply any standards-related measure, including any such measure relating to safety, the protection of human, animal or plant life or health, the environment or consumers, and any measure to ensure its enforcement or implementation.” The Parties are also allowed to have the level of protection that they consider best as long as the measures do not constitute trade restrictions.¹³²

Fourth, the question of pollution havens is addressed by the rejection of lowering environmental standards as a method of attracting investment.¹³³ Article 1114 (1) provides that “the Parties recognize that it is inappropriate to encourage investment by relaxing domestic health, safety or environmental measures”.¹³⁴

Fifth, the trade dispute settlement within NAFTA places the burden of proof in favor of maintaining of environmental legislation.

Finally, NAFTA also contains a side agreement dedicated entirely to environmental concerns¹³⁵ - the parallel **North American Agreement on Environmental Cooperation**. It focuses on facilitating environmental cooperation and achieving more effective environmental enforcement in the NAFTA countries. The agreement has disseminated public information on regional environmental issues and made it easier for citizens to understand specific environmental problems in their communities.¹³⁶

NAAEC sets the promotion of sustainable development as one of its objectives¹³⁷ and provides some assurances that environmental concerns would be addressed and thus allayed some of the political opposition to NAFTA.

In general, NAFTA addresses the trade and environmental nexus in a rather comprehensive way. However, its environmental regime does not provide the best tools for environmental protection as regards oil trade in particular.

As the specific energy chapter provides no reference to sustainable development, the general NAFTA and NAAEC environmental provisions would apply to energy sector. The lack of specific environmental

¹³¹ *Ibid.* article 903

¹³² *Ibid.* article 904

¹³³ Kirton, John J. “*Linking Trade, Environment, and Social Cohesion- NAFTA experiences, global challenges*”, Ashgate Publishing Limited, 2002, p. 32

¹³⁴ NAFTA, Article 1114 (1)

¹³⁵ Francioni, Francesco “*Environment, Human Rights and International Trade*”, Hart Publishing, Oxford-Portland Oregon, 2001, pp. 313-314

¹³⁶ *Ibid.*, p. 345

¹³⁷ North American Agreement on Environmental Cooperation, Article 1(b), available at http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/naaec02.cfm?varlan=english (latest visited 1-12-2007)

agreements incorporated in energy sector is a great disadvantage of NAFTA, because the general instruments dealing with environmental concerns are themselves flawed.

First, the recognition of sustainable development in the preamble is not something new in international trade law. On the contrary, it does not provide for any strategy to ensure that the trade agreement would *de facto* promote sustainable development.

Second, despite the fact that NAFTA clarifies that its provisions prevail over inconsistent provisions in any other international agreement involving a NAFTA party,¹³⁸ it expressly subordinates its provisions to the limited list of five specific environmental agreements.¹³⁹ The obligations set out in the listed provisions will prevail over inconsistent NAFTA provisions. Nonetheless, the NAFTA parties are obliged to use the least restrictive means that is “equally effective” and “reasonably available”.¹⁴⁰ In fact, a measure pursuant to the listed environmental agreements may still be inconsistent with NAFTA.

Third, NAFTA contains provisions on Technical regulations and standards, which are important tools to increase the efficient use of energy. The Parties have a wide margin of discretion in establishing the level of protection; and the technical provisions lack clear guidance on their applicability.

Finally, the NAFTA countries have submitted very few of their disputes to dispute settlement panels, and have not requested a panel to be established in any environmental dispute.¹⁴¹

3.5 Summing up the findings of the chapter

In Chapter 3 of this Thesis, I have demonstrated the most significant international trade agreements as applied to cross-border oil trade. Of a wide range of international trade agreements, only a few have been chosen for the discussion in this paper. For the purpose of delimitation, I have singled out the following three groups- multilateral, plurilateral sectoral and regional integration agreements. The first two groups, as the wording suggests, have the most significant number of signatories. Yet, the third group- designed to promote trade liberalization among certain countries within a specific geographical area- has gained a great practical significance and a high penetrating power.

¹³⁸ NAFTA, Article 103 (2)

¹³⁹ *Ibid.* article 104

¹⁴⁰ *Ibid.* article 104(1)

¹⁴¹ Francioni, Francesco “*Environment, Human Rights and International Trade*”, Hart Publishing, Oxford-Portland Oregon, 2001, p. 320

Thus, I have distinguished the following agreements within the three groups:

- Multilateral trade agreements- the General Agreement on Tariffs and Trade and the Agreement on Technical Barriers to Trade- under the WTO umbrella;
- Plurilateral sectoral agreements- the Energy Charter Treaty with its Protocol on Energy Efficiency and Environmental Related Aspects;
- Regional Integration Agreements- the North America Free Trade Agreement

All the agreements within the three groups are applicable to international oil trade and contain specific provisions addressing environmental concerns. Besides, the agreements within the last two groups explicitly deal with energy issues.

Lastly, I have illustrated the basic legal tools aimed at safeguarding of environmental issues, which have been provided by the aforementioned trade agreements. In the next, I will provide a comparative analysis of the provisions that shape a “sustainable oil trade”.

4 Comparative Analysis and Conclusion

4.1 Comparative analysis

4.1.1 Sufficient environmental protection?

The primary objective of the international trade agreements is to serve as important tools for trade liberalization and creating of a sustainable global trading system. For this purpose, the GATT trade principles- including those of MFN and NT- constitute a model upon which NAFTA and ECT have been built. However, the process of economic and legal integration at global and regional levels has created a dilemma in terms of how to link trade liberalization with environmental and social issues so that the three aspects mutually complement each other.

Notably, the principle of sustainable development is addressed to- directly or inexplicitly- by all the trade agreements that have been treated in this Thesis. I have distinguished a number of mechanisms aimed at promoting of sustainability, which are incorporated in the provisions of the three groups of the agreements- the basis for the comparative analysis in this Thesis. As the next step, I have classified the “green mechanisms” that are offered by the compared agreements into the following groups:

- The direct reference to the concept of sustainable development in the Preamble to the agreement.

All the three groups of agreements recognize sustainable development in their Preambles. However, such a measure is twofold. On the one hand, an explicit recognition of the principle of sustainable development is often used to interpret trade measures, particularly in the light of exceptions and other aspects of trade agreements. On the other hand, there is no strategy to ensure that a trade agreement will be able to promote sustainable development,¹⁴² as Preambles in general have a non-binding character.

- All forms of derogation from trade rules: the general exceptions related to conservation of natural resources (Article XX (g) of the GATT), specific exceptions in the TBT provisions that conflict with the environmental issues and, finally, derogations justified by constitutional peculiarities (NAFTA, Annex 602.3).

¹⁴² Bartels, Larand, Ortino, Federico “*Regional Trade Agreements and the WTO Legal System*”, Oxford University Press, 2006, pp. 336-337 (Cordonier Segger, Marie-Claire “*Sustainable Development in Regional Trade Agreements*”)

However, the difficulty in application of the GATT XX(g) exception is at hand. To have legitimacy, trade-related measures shall pass a double test:

-they have to fall within the scope of Article XX(g)
and

-they shall meet the conditions imposed by the Chapeau of Article XX.

The case law (though, limited in scope) illustrates that such an approach seeks to impose considerable additional restrictions on the scope of national environmental policies.

The specific exceptions of the TBT provisions leave Members with sufficient margin of discretion in pursuing legitimate regulatory objectives, the extent of which is hard to determine in the absence of clear regulatory provisions and an established line of case law.

Finally, the exemptions justified by constitutional peculiarities limit the coverage of NAFTA with respect to energy.

- Recalling other Environmental agreements (the ECT, Preamble) and recognition of the supremacy of other environmental agreements (NAFTA, Article 104, Annex 104.1).

In this respect, two issues shall arise. Firstly, the recognition of the importance of environmental agreements in the Preamble is not binding, but only suggestive. Secondly, the list of the environmental provisions of NAFTA is exhaustive.

- Complementary side agreements dealing with environmental issues (the TBT Agreement, the Protocol on Energy Efficiency and Related Environmental Aspects of the ECT, the North American Agreement on Environmental Cooperation)

Although the three complementary side agreements refer to environmental issues, they all initially are designed to govern different policies. Thus, the Protocol on Energy Efficiency entirely aims at enhancing of energy efficiency, the TBT rules are primarily designed to eliminate the use of standards-related measures as barriers to trade, and the NAEEC is entirely devoted to environmental issues. None of the above mentioned complementary side agreements deals comprehensively with environmental and energy issues at the same time.

- Energy provisions of the trade agreement directly supporting sustainable development

Alas, the only such provision is found in ECT (Article 19), the wording of which is of a rather vague and suggestive character.

4.2 Summary of the results of the comparative analysis

To summarize, the major international trade agreements have incorporated environmental concerns. However, they all suffer from common defects that can be sketched in the following way:

- Non of the three groups of the agreements suggest a clear strategy to ensure that a trade agreement will be able to promote sustainable development;
- All the three groups of agreements allow for derogation from the trade principles, rather difficult obtainable in practice;
- All the three major trade agreements contain complementary side agreements dealing with environmental issues, but none of the complementary agreements is equipped to deal with environmental and energy issues at the same time

In the next chapter, I will suggest diverse ways to cure the lack of efficient environmental protection in the major international trade agreements related to oil trade.

At first, I will suggest an outline of different means to enhance the existing legal instruments created to promote sustainable development in each of the three groups of international trade agreements. Afterwards, I will summarize the suggested measures and will advise a common solution for the three groups of the agreements.

5 De lege ferenda perspective: what improvements can be made?

5.1 Reforming the WTO/GATT

One of the important goals of the WTO is the optimal use of the world's resources in accordance with the concept of sustainable development.¹⁴³ Nonetheless, oil sector remains largely exempt from current WTO rules. It is widely known that energy sector poses a number of distinctive features where more energy-specific rules are needed. As it comes to oil trade in particular, WTO/GATT does not specifically regulate energy trading.

Therefore, the WTO/GATT provisions should be amended to address the energy and environmental issues. This can be achieved through:

1. Creative expanding of the existing agreements;
2. Initiating new subject areas for negotiation.

The first mentioned scheme can be achieved through clarification of the WTO rules. In this respect, the need to elaborate common standards for environmental protection in relation to energy issues in the WTO agreements is at hand. To begin with, the exceptions to the WTO trade measures should be interpreted in the light of the environmental agreements. A common approach to interpret the exceptions in an environmentally friendly manner would broaden the scope of application of the GATT and the TBT exceptions.

It also should be mentioned in this respect, the GATT panel decisions have given a very narrow interpretation of the exceptions.¹⁴⁴ Even this approach should be re-considered. On the other hand, the WTO dispute settlement mechanism is *ad hoc* and depends on the nature of the dispute.¹⁴⁵ The GATT jurisprudence has defined petroleum as an exhaustible natural resource.¹⁴⁶ It also has allowed restrictions in petroleum trade on the basis

¹⁴³ Petersmann, Ernst- Ulrich with the assistance of Harrison, James "Reforming the World Trading System- Legitimacy, Efficiency, and Democratic Governance", Oxford University Press, 2005, pp. 523- 530 (Sampson, Gary P. "Is there a Need for Restructuring the Collaboration among the WTO and UN Agencies so as to Harness their Complementarities?")

¹⁴⁴ *United States- Standards for Reformulated and Conventional Gasoline* AB-1996-1, Report of the Appellate Body available at <http://wto.org> (latest visited 08-10-2007)

¹⁴⁵ Esty, Daniel C. "Greening the GATT- Trade, Environment and the Future", Institute for International Economics, Washington DC, 1994, p. 217

¹⁴⁶ *United States- Import Prohibition of Certain Shrimp and Shrimp Products*, AB-1998-4, Report of Appellate Body, available at <http://wto.org> (latest visited 08-10-2007)

of maintaining air cleanliness.¹⁴⁷ As a suggestion, the requirements may be primarily posed on the physical properties of the traded crude oil for the purpose of maintaining air cleanliness. In particular, such import restrictions as specific carbon dioxide taxes, volume limitations or trade bans may come into play to limit trade in heavy crudes that are more environmentally damaging than light crude oils.

The balancing test requirement as to the application of the XX (b) and (g) GATT exceptions limits the scope of application of the exemptions. A possible remedy could be to replace the XX (b) and (g) exceptions by a special environmental code. However, it would be difficult to achieve an agreement based on such a radical measure.¹⁴⁸ Instead, a better result could be accomplished by introducing a more neutral test. Yet, a more laxly application of the balancing test could lead to abuse of the provisions.

The second way to expand the GATT provisions would be to negotiate another side agreement methodically dealing with the energy and environmental issues. However, a side agreement would instead create a new obligation, but not solve the existing problems.

In the light of the foregoing considerations, the most appropriate way to enhance environmental protection in the WTO agreements is the re-interpretation of the existing exemptions:

- A common approach to interpret the exceptions in an environmentally friendly manner would broaden the scope of application of the GATT and the TBT environmental exceptions;
- the interpretation of the exceptions to the WTO trade measures in the light of the environmental agreements would open the window for the “green measures” and extend the list of exemptions

5.2 A more sustainable Energy Charter Treaty

For the purpose of promoting of sustainable development, one way to enhance the mutual supportiveness between trade liberalization and environmental protection is to eliminate conflict between the two regimes. At the first view, the ECT deals comprehensively with this problem, because it has established a bridge between energy trade and sustainable development - through Article 19 and the Protocol on Energy Efficiency and Related Environmental Aspects.

¹⁴⁷ *United States- Standards for Reformulated and Conventional Gasoline* AB-1996-1, Report of the Appellate Body available at <http://wto.org> (latest visited 08-10-2007)

¹⁴⁸ Esty, Daniel C. *Greening the GATT- Trade, Environment and the Future*, Institute for International Economics, Washington DC, 1994, p. 205

However, the vague wording and non-binding character of the central environmental article (Article 19) do not serve to guarantee to the best environmental protection. It follows that Article 19 should obtain a new- more precise and mandatory- shape. A good solution could be to include a number of mandatory targets for environmental improvements in the wording of the Article. This would clearly strengthen its effect.

Further, the wording of the Article 19 suggesting that members shall act in a “*cost-effective*” and “*economically efficient*” manner for the purpose of fulfilling environmental obligations¹⁴⁹ need to be softened, if not replaced. Recognition of the environmental supremacy over the economic factors would broaden the scope of the application of the Article 19.

Another way to enhance environmental effectiveness of the ECT is to reform its Protocol on Energy Efficiency and Related Environmental Aspects. Though it has established a clear link between energy efficiency and sustainable development, it does not contain specific provisions directly regulating environmental issues. Indeed, to include provisions dealing with the environmental concerns in a methodological way into the Protocol would considerably increase its environmental significance.

However, the question if instant results could be achieved by introducing more clear and precise environmental provisions into the ECT and its Protocol is twofold. The existing conflicting trends and issues, such as globalization, global climate change, energy security, fuel poverty, access to energy, restructuring, transition, and sustainable development give decision-makers difficulty. These issues require a long-term perspective and a consistent policy foundation.¹⁵⁰

To summarize, the central environmental provision of the ECT (Article 19) needs to be improved by:

- granting the Article 19 a mandatory status;
- Softening of its rather restrictive manner of application;
- Granting the wording of the Article a more clear and precise character

The Protocol lacks provisions directly dealing with environmental issues. Instead, the ECT and its Protocol on Energy Efficiency and Related Environmental Aspects are both aimed at reduction of adverse environmental impacts arising from the use of energy. The objective can be achieved through improving of energy efficiency. Despite the fact that

¹⁴⁹ Energy Charter Treaty, Article 19

¹⁵⁰ Energy Charter Secretariat with cooperation from European Bank for Reconstruction and Development, Euroheat and Power “*Policy Developments and Challenges in Delivering Energy Efficiency*”, 2007, p. 22, available at http://www.encharter.org/fileadmin/user_upload/document/EE_report_2007_ENG.pdf (latest visited 01-12-2007)

energy efficiency has become highly relevant today, the policy environment is very fluid.

5.3 Greening the NAFTA

The NAFTA regime has provided a model for linking trade, environmental and social dimensions. However, its relationship with other trade agreements, particularly with GATT, is rather complex. The parties affirm their existing rights and obligations with respect to each other under the GATT and to other relevant agreements. In the event of any inconsistency between the provisos of NAFTA and other agreements, NAFTA prevails except as otherwise provided. Likewise its followers, NAFTA suffers a number of defects in terms of sufficient environmental protection.

NAFTA provides a long-term framework for energy trade among the three countries. It contains specific energy provisions - Chapter 6, and also refers to other elements, such as the disputes mechanism, arrangements for government procurement and the like which also affect trade in energy and related services. However, the energy chapter lacks specific environmental provisions, which is a great disadvantage of NAFTA, because its general instruments dealing with environmental concerns are inadequate.

Indeed, the explicit recognition of sustainable development in the preamble does not provide for any strategy to ensure that the trade agreement would *de facto* promote sustainable development. Complementary provisions of a more binding nature are needed to promote sustainable development in a more effective way.

Further, the list of five specific environmental agreements as referred to by NAFTA for the sake of recognition of their supremacy is limited. To this list, NAFTA Members should add a number of other environmental agreements they have become Parties to.

Moreover, the TBT provisions of NAFTA require clear and precise articles justifying the exemptions from the trade measures on the basis of environmental protection.

Thus, even one of the “greenest” and most promising international trade agreements as applied to oil trade needs to be reformed in order to enhance environmental protection. It lacks environmental provisions of a more binding character, as well as its list of supreme environmental provisions should be updated.

However, NAFTA contains at least two positive features in the oil context. Firstly, it has made a massive contribution into social and economic development of Mexico. Secondly, the provisions of NAFTA allow for derogations justified by constitutional peculiarities, due to which Mexico

has reserved for a number of activities including exploration, exploitation and foreign trade of crude oil.¹⁵¹

5.4 A common approach

Notably, the three groups of trade agreements have a number of common features, most outstanding of which are:

- All the agreements have a significant number of signatories;
- They all are applied to oil trade;
- They are built upon the GATT principles;
- All the agreements have incorporated environmental concerns;
- Non of the three groups of the agreements suggests a clear strategy to ensure that a trade agreement will be able to promote sustainable development;
- All the three groups of agreements allow for derogation from the trade principles, although it is rather difficult to obtain in practice;
- All the three major trade agreements contain complementary side agreements dealing with environmental issues;
- None of the complementary agreements is equipped to deal with environmental and energy issues at the same time.

Theoretically, it could be possible to enhance the effectiveness of environmental provisions of the existing international trade agreements as applied to oil trade through expanding the existing provisions over energy and environmental issues, re-negotiating additional side agreements specifically dealing with energy and environmental concerns, allowing reservations aimed at conservation of exhaustible natural resources (crude oil) justified by national peculiarities, softening the restrictive measure of the applicability test when applying exemptions. In practice, all the suggested measures would certainly face barriers. Re-negotiating a multilateral trade agreement is a steady process that requires numerous efforts; and softening of the applicability test would distort the equilibrium between the permissible and the restricted.

To achieve “sustainable oil trade”, it is necessary to pose certain environmental requirements on the properties of the traded crude oil. As a suggestion, trade restrictions (special taxes, bans, import limitations) may be introduced to favor export of light crude oil that is more environmentally friendly than heavy crudes. Such measures have to satisfy other GATT requirements.

Further, special certification procedures, technical standards requirements and regulations may come into play: certifications on physical properties of oil (for instance, contaminants-free crude oil); technical regulations

¹⁵¹ NAFTA, Annex 602.3

concerning the use of clean and efficient technologies at the exploration and production stages; certification requirements confirming that crude oil and “special wastes”¹⁵² have been disposed in the most environmentally sound way.

¹⁵² Wastes generated from the exploration, development and production of crude oil (as categorized by EPA- United States Environmental protection Agency), consulted at <http://www.epa.gov/epaoswer/other/oil/index.htm> (latest visited 24-12-2007)

6 Concluding summary

In the manifold energy mix, oil has taken quite a special place. At least in this Thesis, it has been treated as the most exceptional natural resource. In fact, such a great amount of attention particularly to oil can be easily justified in the light of the following considerations:

- Oil is an exhaustible natural resource, which should be seen in the context of growing global energy demand;
- It is highly sensitive to political and economic changes;
- Historically, oil trade has been an object of scrutiny for a great number of environmentalists;
- Oil is tightly bound to the concept of sustainable development;
- Oil plays the major role in economic development;
- In the light of the principle of states' sovereignty over natural resources, it is a latent source of prosperity.

In this Thesis, an attempt has been made to illustrate the difficulties that are faced to by legislators and policy makers, when finding a fine balance between two (in fact, opposed) interests: that of promotion of trade liberalization, including energy materials, and that of safeguarding environmental issues. The global energy outlook (provided by IEA) and world oil outlook (provided by OPEC) illustrate the growing regional and sectoral interdependence on oil and increasing demand and supply. In this context, environmental concerns grow together with energy security concerns and the need of energy efficiency.

Trade liberalization, environmental protection and social cohesion form the principle of sustainable development- the hallmark of International Environmental Law. In view of the fact that the efficient use of natural resources is tightly bound to the concept of sustainable development, the actors in the international oil trade scene face a difficult challenge to link the three realms in a mutually supportive way.

To promote trade between countries and regions, a great number of legal instruments has been used, many of which are applied to international oil trade. For the purpose of delimitation, I have singled out three major groups of international trade agreements relevant to energy sector:

1. The multilateral trade agreements
2. The plurilateral sectoral agreements
3. The regional integration agreements.

The first group is covered by the GATT- the agreement under the WTO umbrella that has embodied the foundational principles of international trade relations- and the TBT agreement. The two WTO agreements have gained a great practical significance, and their penetrating power is high. Although

the WTO rules were not originally designed to deal with energy trade related issues, they fully apply to trade in energy products and materials.

The TBT Agreement was particularly designed to eliminate discrimination through technical regulations, as well as it does not allow standards and conformity assessment procedures to create unnecessary obstacles to trade or be used as protectionist tools. Thus, in excess of being a multilateral trade agreement applicable to oil trade, the TBT also contains special provisions.

The second group consists of the Energy Charter Treaty and the Protocol on Energy Efficiency and Related Environmental Aspects- the legal instruments that have a considerable number of signatories, including post-Soviet countries. The ECT is aimed at improving energy efficiency and is an investment protection treaty for the energy sector that covers the terms under which energy can be traded and transported.

The third group is covered by the NAFTA that has formed the world's largest trade area and serves as the model of *continental* agreement for developing countries. It also contains a specific energy chapter and specific provisions on Technical regulations and standards.

The reference to sustainable development has been made in all the three groups of international trade agreements related to cross-border oil trade. However, the legal tools suggested by the most significant international trade agreements do not appear to reach a sufficient pace of development in order to be in line with the recent energy trends. Most obvious defects of the trade agreements relevant to oil trade are the lack of a clear strategy to ensure that a trade agreement will be able to promote sustainable development, practical difficulties in obtaining derogations from trade principles, lack of strategy allowing complementary side agreements to deal with environmental and energy issues at the same time.

The suggested reforms of the existing “sustainable” provisions of international trade agreements are rather firm, as any radical measures such as negotiation of additional side agreements or renegotiation of provisions specifically dealing with energy and environmental concerns –would imply a painful surgery of the trade agreements. At this point, the process of renegotiating of international agreements is multifaceted; and an additional side agreement would put superfluous obligations on the members.

Instead, I have suggested a firmer interpretation of the existing trade measures in the light of environmental agreements/provisions. I have also suggested posing certain environmental requirements on the properties of the traded crude oil, which could be achieved through adoption of specific carbon dioxide tax, import limitations or import bans (as the most radical measure) of unconventional crude oil (provided that such measures would satisfy other GATT requirements). Finally, I have suggested a stricter technical certification procedure, special technical standards requirements

and regulations aimed at, *inter alia*, enhancing the quality of exploration, exploitation, production and disposal of crude oil.

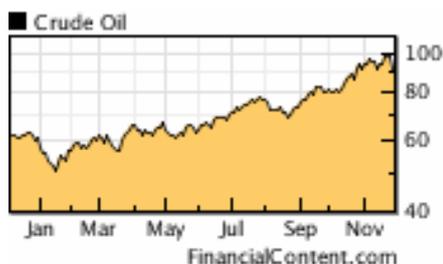
At this point, I close the final chapter of the Thesis, as its overall objective – that of discussing how the principle of sustainable development is emerged in international legal instruments that shape the parameters of sustainable cross-border oil trade and drawing a *de lege ferenda* perspective for the sake of a more sustainable oil trade - has been achieved.

Supplement A – Facts and Figures

This supplementary part of the Thesis is merely aimed to provide the reader with the basic facts and figures as a background to the main theme.

In the next, I will highlight the development of crude oil prices during the period of January-November 2007. For this purpose, I have consulted www.financialcontent.com. The diagram as above illustrates the development of crude oil prices during the financial year 2007 of *Nymex*, the world's largest physical commodity futures exchange and the preeminent trading forum for energy and precious metals¹⁵³.

Nymex Crude Oil



The diagram demonstrates the dramatic rise of crude oil prices in 2007, approaching 100 US dollars per barrel in November 2007.¹⁵⁴ As oil prices have a massive impact on the global economy, such a development put the crude oil markets together with a wide range of adjacent issues – including those of energy efficiency and sustainability - under the spotlight in 2007.

Oil is an exhaustable natural resource. At this point, I will highlight oil reserves and production of each of the *7 Sisters*¹⁵⁵ using the most recent data available online.

¹⁵³ <http://www.nymex.com/intro.aspx> (latest visited 02-12-2007)

¹⁵⁴ The diagram is available at [http://studio.financialcontent.com/Engine?Account=ogj&PageName=QUOTE&Ticker=\\$OIL](http://studio.financialcontent.com/Engine?Account=ogj&PageName=QUOTE&Ticker=$OIL) (latest visited 02-12-2007)

¹⁵⁵ The 7 Sisters are: Saudi Aramco (Saudi Arabia), JSC Gazprom (Russia), CNPC (China), NIOC (Iran), PDVSA (Venezuela), Petrobra (Brazil), Petronas (Malaysia), available at [http://en.wikipedia.org/wiki/Seven_Sisters_\(oil_companies\)](http://en.wikipedia.org/wiki/Seven_Sisters_(oil_companies)) (latest visited 02-12-2007)

1. Saudi Aramco (www.saudiaramco.com)

*Oil reserves and production*¹⁵⁶

Recoverable crude oil: 259.9 billion barrels and condensate reserves

Crude oil production: 8.9 million barrels per day

2. JSC Gazprom (www.gazprom-neft.com)

*Sibneft Oil Reserves (million barrels)*¹⁵⁷

	1998	1999	2000	2001	2002	2003	2004
Proved SEC	-	-	-	-	2 129	2 368	2 461
Proved SPE	4 130	4 599	4 644	4 646	4 575	4 623	4 656

Production (per 2006): 0,67 bpd¹⁵⁸

3. CNPC (www.cnpc.com)

Oil production: 2.69 million barrels of crude oil/day

Oil reserves: 2.69 billion metric tons¹⁵⁹

4. NIOC (www.nioc.ir)

Proven Oil Reserves (January 1, 2007E): 136 billion barrels

Oil Production (2006E): 4.16 million barrels per day (of which 3.8 million barrels per day was crude oil)¹⁶⁰

5. PDVSA (www.pdvsa.com)

Proven oil reserves (2007): 80.0 billion barrels¹⁶¹

¹⁵⁶

<http://www.saudiaramco.com/irj/go/km/docs/SaudiAramcoPublic/FactsAndFigures/F%26F2006/KeyFigures.pdf> (latest visited 02-12-2007)

¹⁵⁷ <http://www.gazprom-neft.com/pages.php?page=16&lang=1> (latest visited 02-12-2007)

¹⁵⁸ <http://www.whiskeyandgunpowder.com/ppc/RussianOilReport2.html> (latest visited 02-12-2007)

¹⁵⁹ <http://www.cnpc.com.cn/eng/company/presentation/Glance/> (latest visited 02-12-2007)

¹⁶⁰ <http://www.eia.doe.gov/emeu/cabs/Iran/Profile.html> (latest visited 02-12-2007)

¹⁶¹ <http://www.eia.doe.gov/emeu/cabs/Venezuela/Oil.html> (latest visited 02-12-2007)

Production: 3.3 million barrels a day¹⁶²

6. Petrobras (www.petrobras.com)

Reserves: 11.458 billion barrels of oil and gas equivalent boe
Production: 1.920 barrels per day (bpd) of oil and LPG¹⁶³

7. Petronas (www.petronas.com)

Reserves (2005): 19.49 bn boe¹⁶⁴

Crude oil and condensate reserves: 5.29 bn barrels

Oil production (2003): 631,400 b/d¹⁶⁵

At the first glance, the *7 Sisters*- the most powerful oil companies of the world- possess huge oil reserves. However, the production stays high as well; and in order to satisfy the growing energy demands the *7 Sisters* need to increase their production level. As it comes to oil trade, one might say that environmental issues are shaded by economic concerns. I will disagree, as sustainable development includes three dimensions: environmental, economic and social. It is also closely linked to sustainable use of natural resources. At this point, promoting of sustainable oil trading becomes one of the important topics of today's agenda.

¹⁶² <http://www.csmonitor.com/2006/0531/p04s01-woam.html> (latest visited 02-12-2007)

¹⁶³ http://www2.petrobras.com.br/ingles/ads/ads_Petrobras.html (latest visited 02-12-2007)

¹⁶⁴ <http://www.gasandoil.com/goc/company/cns52914.htm> (latest visited 02-12-2007)

¹⁶⁵ <http://www.oilonline.com/news/features/oe/20041001.Petronas.16037.asp> (latest visited 02-12-2007)

Bibliography

Literature

Anderson, Kim/ Blackhurst, Richard “*The greening of world trade issues*”, published 1992 by Harvester Wheatsheaf

Bartels, Larand, Ortino, Federico “*Regional Trade Agreements and the WTO Legal System*”, Oxford University Press, 2006, p.313 (Cordonier Segger, Marie-Claire “*Sustainable Development in Regional Trade Agreements*”)

Birne, Patricia/Boyle, Alan “*International Law and the Environment*”, second edition

Bugge, Thorbjørn Daniel “*WTO Adjudication- an institutional analysis of adjudicative balancing of competing interests- exemplified with developments in interpretation of GATT Article II and XX*”, Forlaget Thomson

Egelund Olsen, Birgitte/Steinicke, Michael/ Engsig Soerensen, Karsten “*WTO Law- from a European perspective*”, Forlaget Thomson

Esty, Daniel C. “*Greening the GATT- Trade, Environment and the Future*”, Institute for International Economics, Washington DC, 1994

Filjalowski, Agatha/Cameron, James “*Trade and Environment: Bridging the Gap*”, the article by Thomas Cottier “The WTO and environmental law: three points for discussion”

Folsom, Ralf/ Gordon, Michael Wallace “*International Trade and Economic Relations in a Nutshell*”, Thomson West, 2004

Folsom, Ralph “*NAFTA and Free Trade in the Americas*”, 2nd edition, Thomson West, 2004

Francioni, Francesco “*Environment, Human Rights and International Trade*”, Hart Publishing, Oxford-Portland Oregon, 2001

Kirton, John J. “*Linking Trade, Environment, and Social Cohesion- NAFTA experiences, global challenges*”, Ashgate Publishing Limited, 2002

Lyster, Rosemary, Bradbrook, Adrian “*Energy Law and the Environment*”, Cambridge University Press, 2006

Maskus, Keith E./ Wilson, John S./ Otsuki, Tsunehiro “*Qualifying the Impact of Technical Barriers to Trade – A Framework for Analysis*”, The World Bank Development Research Group Trade, December 2000

Petersmann, Ernst- Ulrich with the assistance of Harrison, James ”*Reforming the World Trading System- Legitimacy, Efficiency, and Democratic Governance*”, Oxford University Press, 2005 (Sampson, Gary P. “*Is there a Need for Restructuring the Collaboration among the WTO and UN Agencies so as to Harness their Complementarities?*”)

Revesz, Richard L./Sands, Philippe and Stewart, Richard B. “*Environmental Law, the Economy, and Sustainable Development*”, Cambridge University Press, 2000

International Legal Instruments

Agenda 21-available at <http://www.un.org/esa/sustdev/documents/agenda21/index.htm> (latest visited 17-09-2007)

Energy Charter Treaty- available at www.encharter.org (latest visited 27-10- 2007)

GATT and TBT Agreements are available at www.wto.org (latest visited 13-11-2007)

Johannesburg Plan of Implementation-available at http://www.thecommonwealth.org/Internal/145632/understanding_the_johannesburg_plan_of_implementation/ (latest visited 17-09-2007)

NAFTA is available at http://www.nafta-sec-alena.org/DefaultSite/index_e.aspx?DetailID=78 (latest visited 26-10-2007)

North American Agreement on Environmental Cooperation, available at http://www.cec.org/pubs_info_resources/law_treat_agree/naaec/naaec02.cfm?varlan=english (latest visited 1-12-2007)

Rio Declaration on Environment and Development –International Environmental Law Policy Series- Johnson, Stanley P. “*The Earth Summit-the United Nations Conference on Environment and Development (UNCED)*”, Graham Trotman/Martinus Nijhoff, the text of Rio Declaration is also available at <http://www.un.org/documents/ga/conf151/aconf15126-1annex1.htm> (latest visited 28-10-2007)

Reports and Speeches

ARAMCO, *Annual Report 2006* available at http://www.saudiaramco.com/irj/go/km/docs/SaudiAramcoPublic/AnnualReview/2006/AnnualReview_2006.pdf (latest visited 11-10-2007)

Energy Charter Secretariat “*Putting a price on Energy. International Pricing Mechanisms for Oil and Gas*”, 2007, available at http://www.encharter.org/fileadmin/user_upload/document/Oil_and_Gas_Pricing_2007_ENG.pdf (latest visited 30-11-2007)

Energy Charter Secretariat with cooperation from European Bank for Reconstruction and Development, Euroheat and Power “*Policy Developments and Challenges in Delivering Energy Efficiency*”, 2007, available at http://www.encharter.org/fileadmin/user_upload/document/EE_report_2007_ENG.pdf (latest visited 01-12-2007)

Executive summary of IEA’s *World Energy Outlook 2006*, available at <http://www.iea.org/Textbase/npsum/WEO2006SUM.pdf> (latest visited 17-10-2007)

Executive summary of IEA’s *World Energy Outlook 2007*, available at <http://www.iea.org/Textbase/npsum/WEO2007SUM.pdf> (latest visited 11-11-2007)

The Greening of World Trade, A Report to EPA from The Trade and Environment Committee of the National Advisory Council for Environmental Policy and Technology, the U.S. Government Printing Office, 1993, p. 45

Lautenberg Report, available at <http://www.lautenberg.senate.gov> (latest visited 09-09-2007)

World Oil Outlook 2007, available at <http://www.opec.org/library/World%20Oil%20Outlook/pdf/WorldOilOutlook.pdf> (latest visited 11-11-2007)

”*30 Key Energy Trends in the IEA and Worldwide*”, IEA, 2005, available at http://www.iea.org/textbase/nppdf/free/2005/energy_trends.pdf (latest visited 12-10-2007)

The speech of Secretary General André Mernier at the World Energy Council, Rome, 2007, available at http://www.encharter.org/index.php?id=59&id_article=125&L=0 (latest visited 30-11-2007)

The speech of Kofi Anan in the United Arab Emirates, Dubai, 6 February 2006, available at

<http://www.unep.org/Documents.Multilingual/Default.Print.asp?DocumentID=470&ArticleID=5136&l=en> (latest visited 30-09-2007)

Websites

The homepage of ARAMCO	www.saudiaramco.com (latest visited 12-11-2007)
The homepage of CNPC	www.cnpc.com (latest visited 12-11-2007)
Energy Charter Treaty	www.encharter.org (latest visited 27-10-2007)
The homepage of Gazprom	www.gazprom-neft.com (latest Visited 02-12-2007)
International Centre for Trade and Sustainable Development	http://www.ictsd.org/ (latest visited 18-11-2007)
The homepage of NIOC	www.nioc.ir (latest visited 18-11-2007)
The official site of OECD	www.oecd.org (latest visited 17-11-2007)
<i>Oil and Gas Journal</i>	www.ogj.com (latest visited 19-11-2007)
<i>Oil online</i>	www.oilonline.com (latest visited 19-11-2007)
The homepage of PDVSA	www.pdvsa.com (latest visited 19-11-2007)
The homepage of PETROBRAS	www.petrobras.com (latest visited 19-11-2007)
The homepage of PETRONAS	www.petronas.com (latest visited 19-11-2007)

The homepage of SHELL	www.shell.com (latest visited 12-11-2007)
The official site of United Nations	www.un.org (latest visited 18-11-2007)
United Nations Environment Programme	www.unep.org (latest visited 15-11-2007)
The official homepage of WTO	www.wto.org (latest visited 13-11-2007)
World Bank	www.worldbank.org (latest visited 08-11-2007)

Articles

Beghin, Jonh/Roland-Holst, David/van der Mensbrugge, Dominique “A *Survey of the Trade and Environment Nexus: Global Dimensions*”, OECD Economic Studies No. 23, Winter 1994, available at <http://www.oecd.org/dataoecd/1/43/39030956.pdf> (latest visited 15-09-2007)

Bradbrook, A.J “*Significance of the Energy Charter Treaty*”, Faculty of Law, University of Adelaide, available at http://www.sciencedirect.com/science?_ob=MIimg&_imagekey=B6V1T-3Y0RG10-T-1&_cdi=5683&_user=745831&_orig=search&_coverDate=09%2F01%2F1999&_sk=999359998&view=c&wchp=dGLbVzb-zSkzk&_valck=1&md5=46888077e738b743aefb867e79410639&ie=/sdarticle.pdf (latest visited 20-09-2007)

Broome, Stephen A. “*Conflicting Obligations for Oil Exporting Nations?: Satisfying Membership Requirements of both OPEC and the WTO*”, the George Washington International Law Review, 2006, available at <http://lautenberg.senate.gov/newsroom/record.cfm?id=254218> (latest visited 15-11-2007)

Chalker, James “*Making the investment provisions of the Energy Charter Treaty sustainable development friendly*”, Published online: 25 October 2006, Springer Science and Business Media B.V. 2006, available at

<http://springerlink.metapress.com/content/tg7017116g548110/fulltext.pdf>
(latest visited 15-10-2007)

Fletcher, Sam “*Market Watch: Crude pulls back from \$98/high*”, available at
[http://www.ogj.com/display_article/311516/7/ONART/none/GenIn/1/MARKET-WATCH:-Crude-pulls-back-from-\\$98/high/](http://www.ogj.com/display_article/311516/7/ONART/none/GenIn/1/MARKET-WATCH:-Crude-pulls-back-from-$98/high/) (latest visited 12-11-2007)

Selivanova, Yulia “*The WTO and Energy, WTO Rules and Agreements of Relevance for the Energy Sector*”, Energy Charter Secretariat, ICTSD Programme on Trade and Environment, August 2007, available at

<http://www.trade-environment.org/output/ictsd/resource/The%20WTO%20and%20Energy.pdf>
(latest visited 12-10-2007)

Miscellaneous

The definition of crude oil is available at
<http://en.wikipedia.org/wiki/Petroleum> (latest visited 15-09-2007)

Britannica Online Encyclopedia
<http://search.eb.com/eb/article-9028047> (latest visited 15-09-2007)
Committee on Technical Barriers to Trade, *Note by the Secretariat*, TBT/W/156, 2 March 1992 p. 3

<http://www.citizen.org/trade/nafta/> (latest visited 26-10-2007)

Energy Charter Secretariat, *The Energy Charter Treaty and Related Documents, a legal framework for International Energy Cooperation*, p.13

International Economic Law and policy Blog “*OPEC, WTO and Hotelling’s Rule*”, available at
http://worldtradelaw.typepad.com/ielpblog/2006/11/opec_and_wto.html
(latest visited 15-11-2007)

Information about environmental effects of heavy crudes is available at the homepage of **Battelle**, an international science and technology enterprise, available at
<http://www.battelle.org/Environment/publications/envupdates/Fall2003/article9.stm> (latest visited 24-12--2007)

Keith E.Maskus/ John S. Wilson, Tsunehiro Otsuki *Qualifying the Impact of Technical Barriers to Trade – A Framework for Analysis*, The World Bank Development Research Group Trade, December 2000, available at

http://www.wds.worldbank.org/external/default/WDSContentServer/WDSP/IB/2001/02/02/000094946_01012305305688/Rendered/PDF/multi_page.pdf
(latest visited 08-10-2007)

Dr Melaku Geboye Desta, adraft for TDM 2 "*GATT/WTO Jurisprudence in the Energy Sector and Movements in the Marketplace*", Transnational Dispute Management, VolumeI, issue #02- May 2004, available at <http://www.transnational-dispute-management.com/samples/freearicles/tv1-2-article32a.htm> (latest visited 14-11-2007)

Order of 22 September 1995, ICJ Reports 1995, 306

8 July 1996, Advisory Opinion, ICJ Reports 1996, 226 at 241 at <http://www.icj-cij.org/docket/files/95/7495.pdf> (latest visited 09-09-2007)
The Energy Chapter of NAFTA, available at <http://www.sice.oas.org/Trade/NAFTA/chap-06.asp#Chap.VI> (latest visited 12-11-2007)

“Special wastes”, the definition categorized by EPA- United States Environmental protection Agency), consulted at <http://www.epa.gov/epaoswer/other/oil/index.htm> (latest visited 24-12-2007)

United Nations Conference on Trade and Development, *Dispute Settlement, World Trade Organization, 3.10 Technical Barriers to Trade*, United Nations, New York and Geneva, 2003, available at http://www.unctad.org/en/docs/edmmisc232add22_en.pdf (latest visited 09-10-2007)

Table of Cases

Canada- Measures affecting Exports of Unprocessed Herring and Salmon, Report of the Panel adopted on 22 March 1998 (L/6268-35S/98), available at <http://www.worldtradelaw.net/reports/gattpanels/canadaherring.pdf> (latest visited 19-10-2007)

United States- Import Prohibition of Certain Shrimp and Shrimp Products, AB-1998-4, Report of Appellate Body, available at <http://wto.org> (latest visited 08-10-2007)

United States- Standards for Reformulated and Conventional Gasoline AB-1996-1, Report of the Appellate Body available at <http://wto.org> (latest visited 08-10-2007)